ComputerWeekly

Thursday, November 3, 1983

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BARRON . . . "We see it as a component for a lot of Alvey activities."

Inmos plays its trump card

by Philip Hunter

INMOS, the UK state-owned semiconductor company, last Tuesday unwrapped a prototype of its much talked about transputer, a single chip which combines a processor, memory and communications.

Managing director Iann Barron hopes that the transputer will figure prominently in the government's Alvey programme to develop a Fifth Generation of computers.

"We do see it as a component for a lot of Alvey activities," he says.

As expected, the chip is 32-bit, and will process 10 million instructions a second, which is almost 10 times faster than conventional 32-bit chips recently unveiled by US companies such as National Semiconductor.

The processor does not support the Unix or Concurrent CP/M operating systems, but instead *offers Occam, an assembly language developed by Inmos* which also works as an operating system and can be used as a high level language.

The transputer has for several months been dangled as a carrot to potential city investors, and Barron hopes soon to announce new finance to boost further development and marketing. The government has refused to put up any more cash.

BT spends £350m to speed up System X

by Donald Kennett

BRITISH Telecom is to spend £350 million with UK suppliers to almost double the speed of its planned installation of System X, its digital telephone exchanges.

The corporation is to boost the installation of local exchanges to 1¾ million lines by the end of 1986, instead of the planned 1 million. And it will be putting out orders worth around £350 million for trunk and local exchanges to the two System X suppliers, GEC and Plessey, to accelerate its planned installations.

Announcing the move at Telecom 83 in Geneva, BT technology director John Alvey said: "British Telecom wants digital service out there as fast as it can get them."

The orders had not been placed as an attempt to stimulate the export market, he said, although System X was likely to sell well abroad from a strong home market.

He also denied reports that BT had been on the point of going to Sweden's LM Ericsson for the extra 750,000 digital lines.

"System X is very competitive," he said. "One of the reasons we're talking to people like Ericsson is because we like to know what their costs are.

"We know what their costs are, we've bought several major systems from them. They've been talking to us for 23 years, they're great marketing people.

"Non-British hardware accounts for 5% of our expenditure today. It will be 7% in a couple of years. Including nails, wire and telephone poles we spend £1.75 billion a year, 95% of it in the UK.

"I'd be a very naive procurement man if I guaranteed to my suppliers what I was going to buy from them.

"I'm saying: 'You perform and that's what the market is. If you get it wrong, alternatives are leaving'."

The ordering programme has been stepped up because System X has now been proven in service and because there has been a dramatic reduction in its cost per line – by a factor of three, according to Alvey. The line card was one major element, the cost of which had been cut and the processor was another.

"We have now moved on to second generation technology," he said, said. "The first exchange using the new processor, Coventry Spurs trunk exchange, was cut over two weeks ago. It is a 1,0[illegible] Erlang (calls per hour) exchange. *Eventually it will be 4,000.*"

ALVEY . . . "System X is very competitive."

Licence tells how private BT will work

by Nuala Moran

THE government last week published the draft licence setting out how British Telecom will operate in its privatised future.

It includes BT's obligations to provide a comprehensive telephone service, such as public call boxes, rural services and 999 calls. And it lists restrictions to prevent a privatised BT abusing its position as a monopoly.

BT will be able to make access charges to other networks like private telecomms company Mercury and the Hull telephone service to help pay for uneconomic services.

But BT will not be able to cross-subsidise its own services. For example, BT will not be able to subsidise equipment supply with revenue from its network business.

This is supposed to make it easier for telecomms manufacturers to compete in the market for subscribers' equipment. In fact BT has supplied this market for so long it will be difficult for manufacturers to compete directly.

BT itself has one reservation about the licence – it must allow competitors to hook up to its network. According to BT this will affect its ability to modernise the network.

BT will have to keep increases in rental and local calls below the level of inflation for five years after privatisation.

But POUNC (Post Office Users National Committee) is not satisfied with this, because it says the factor by which prices will be kept below the inflation level, is not defined in the licence.

The unions are also dissatisfied with this assurance. BTUG, the committee of six unions with members working for BT, said. "The assurances are cosmetic, in that without *privatisation none of* them would be necessary."

Union action against Mercury continued last week. Post Office Engineering Union (POEU) members on Whitehall exchanges in Bristol Sanctuary and North Humberside are working to rule and last Wednesday there was a 24-hour strike at Fleet House in Farringdon.

BT continued its policy of bussing engineers in from outside London, *bringing them from as far* afield as Bristol and Birmingham on Thursday.

Mercury launched an appeal on Monday against the high court ruling that it cannot *have an injunction* to stop the POEU refusing to interconnect it to the BT network.

DEC puts power of a Vax on a micro

by John Riley

DIGITAL Equipment is to put the power of a Vax on a micro.

The new 32-bit micro, the MicroVAX I, is scheduled for US deliveries next March and DEC claims that it will deliver the power of a Vax 11/730.

The company has rushed forward a series of hardware and software products to offset the news of its dramatic drop in profit for the first quarter of its financial year and the sharp decline in its share price (a drop of $32 in the last week).

DEC announced another new Vax machine, the Vax 11/175; and details about software additions to the Vax family, including Unix and a Pascal development system.

The MicroVAX I, which supports up to four users, combines VLSI and off-the-shelf chip technology, and is fully compatible with VMS, the Vax operating system. It runs MicroVMS, a version of VMS.

The MicroVAX I will be available in the US in March 1984, and a basic configuration comprising CPU, 512 Kbytes of RAM, two 400 Kbyte floppy drives, a 10 Mbyte Winchester disc drive and an serial line will be $19,880 in the US.

The MicroVAX I will support Ultrix, DEC's version of the Unix operating system based on the Berkeley 4.1 Unix. *Ultrix will be* extended later on this year to run on DEC's Vax minicomputers.

VAXElan, DEC's new Pascal development system for Vax *machines, derives from its* MicroPower Pascal for its 16-bit minicomputers, and allows software developers to write applications programs for the MicroVAX I. VAXElan will be available in the US in January, and will cost $8,200 for a magnetic tape.

The Vax 11/725 is a modified version of the 11/730 designed as a single-user workstation for engineering use – with a Vax station 100 graphic display subsystem – or as a multi-user system with four to eight terminals.

The CPU is the same as that of the 11/730, but packaged in a box the size of a two-door filing cabinet. It does not need air-conditioning or special power connections.

The Vax 11/725 is expected to be available in the US at the end of this month, and a typical entry system, including CPU, 1 Mbyte RAM, RC25 disc drive, two TU58 tape cartridge drives and VMS software licence, is $24,950.

■ Further DEC software releases – page 6

Texas Instruments quits home computers

by John Riley

STUNG by heavy losses in the micro price war, Texas Instruments last week decided to quit the home computer market and concentrate on the personal and business computer market.

The news was announced at the same time as the company revealed a $110.8 million loss in its third quarter, which follows its $119.2 million loss in its second quarter.

"These losses were due almost entirely to the home computer operations," said a Texas Instruments spokesman, "but the other divisions are doing very well, especially the semiconductor division."

He confirmed that production of the 99/4A home computers would cease in November with a "significant" loss of personnel in its manufacturing plant at Lubbock, Texas, and its assembly plant in Rieti, Italy.

Last July, in the aftermath of the second quarter results, Texas Instruments laid off 750 employees at Lubbock and at Abilene in the US. At that time, Texas' stock suffered one of the biggest one-day declines in recent years on the *New York Stock Exchange, with a* 40 points drop to $107, wiping $1 billion off its value. Last week the price closed at $101.

Texas Instruments' 99/4A home computer has suffered badly in the price war, particularly from competition from Commodore.

"The 99/4A is a good machine," said Ian Radley, merchandising controller of computers and video equipment for Currys, the high street electrical retailer, "but it was designed and engineered to reach a higher price point than it's being sold at now. Texas couldn't take out the engineering costs."

Radley acknowledges that the "real problem was in the US market", but says that in the UK Commodore's "aggressive pricing" has been responsible for the 99/4A's problems.

"The customer could buy a 99/4 for £149 and send away for £50 worth of free hardware and software, but Commodore offered a complete VIC20 starter pack that *he could take away with him for* £139, and that has been more attractive."

Texas Instruments will cut the price of the 99/4A still further to clear stocks. In the future it will focus its microcomputer strategy on its TI Professional Computer.

The announcement by Texas did not come as a surprise to Commodore's UK marketing manager, John Baxter. "It's all about efficiency," he said. "You have to be more Japanese than the Japanese in this business."

■ Leader Comment – page 15

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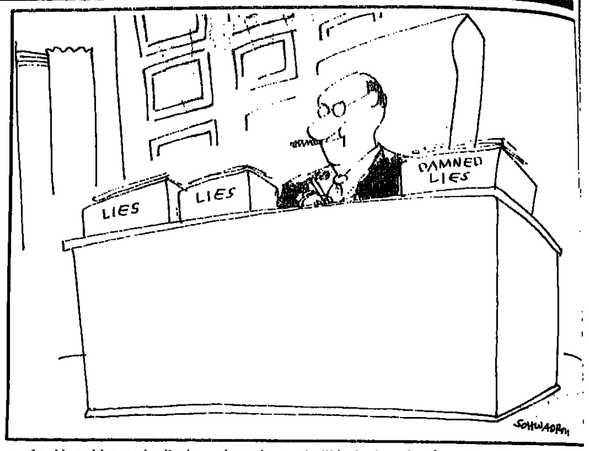
Change is a real challenge for DP managers

Our bosses must modernise, or suffer, says Ted Cluff



I HAVE vivid recollections of my grandfather just over half-a century ago, working in an environment where it was quite common for employees to remain with a single employer for the whole of their working lives.

Some 20 years later (1948-50) I lived in New Zealand and I recall my incomprehension at the number of people (in an economy with no unemployment problems) not only changing their jobs every six months but also changing the type of work they did (profession being too strong a word) every two years.

The point I am illustrating is that times have changed and it is not exactly incongruous for us today, in an area of fast-changing technology, to be expected to change the type of work we do.

Talking as I do to senior people in data processing with many years' experience, it is almost amusing to notice how many of us actually moved into DP by accident from very different jobs.

For 20 years, people working in data processing were in a labour market where they could move on with impunity because they were never running any risks by changing jobs. But as they near 30 years of age, overriding needs for career progression, possibly linked with family commitments, counter this urge for wider experience.

Gradually, with responsibility, they slip into an atmosphere of caution and one of not taking undue risks. This is evident in many

Ted Cluff is secretary-general of the Institute of Data Processing Management.

other ways such as choice of vendor, particularly at a time of replacing kit; the recruitment of skilled replacement staff instead of bringing in trainees; and above all, the absolute dedication to the maintenance of old systems against all the odds.

All this contributes to a reactive attitude to demands made by the users instead of a proactive one. The reactive response is hard enough itself to meet but it appears to be much safer than a proactive one which assentially demands an element of risk-taking.

Proactivity demands something less than 100% contribution to the demands of today in order to give some attention to the demands of tomorrow. This is itself a risk particularly as is the case with the majority of computer installations today which are under-resourced, thus often demanding intimate technical involvement from the manager instead of providing a fuller opportunity to manage.

Of course, it is also true that yesterday's technician who is today's manager tends to feel safe in his natural environment continuing to demonstrate that he still is the best programmer or analyst in the installation.

So why take undue risks by raising a head above the parapet? Surely the rewards from putting out today's fire are much greater than from those incurred by looking far ahead to meet next year's problems. It is a natural, comfortable position to take. But it suffers from one fatal fallacy: that the data processing environment which we know and think we understand, is unchanging.

It hardly needs saying that nothing is further from the truth. The real old hands in the business used to think we were operating in a fast-moving technological era, but that was nothing compared to today. No-one today can handle more than a segment of all that is going on.

And so we all have a slight feeling of helplessness; in fact, as I go round the country addressing meetings, I find a genuine fear of the future because it represents the unknown.

The companies we work for are going to be forced by competition to make radical changes to the way they work and to the manner in which they organise their information flow. Those who fail to change are likely to suffer the fate of others who stood still in the face of change. Yet the executive management of these companies in the main do not know what it all adds up to. Even in Japan, top executives are taking early retirement because they cannot face up to the demands of learning new ways.

So who can take the lead in demonstrating what is possible, what is practical, how it might be done and what benefits it might have? When word processing first came in, it wasn't the DP manager who stepped forward. It was usually the office management people or sometimes administrative managers who thought they understood typewriting needs. Today, we know how many mistakes were made — so many, in fact, that DP people probably could not have done worse.

In all such new areas, no-one can be an oracle. It takes thought, research and, above all, consultation to reorganise a company's information flow to incorporate teletex today with electronic m... an electronic PBX the day d... FAX the day after that with ... processing integrated with DP ... the mainframe database s... where in the middle.

Typically, DP managers ... face up to the technological ch... lenge. Even the concepts of ... formation flow are not too str... since there is a lot in common ... systems analysis.

What constitutes a mean... peak is the need to look at ... business needs of a compa... through the eyes of a membe... the board: will the company ... clude it they are not met a... conversely will the company ... able to handle radical changes?

All this cries out for proact... leadership and I can think of a... one with a better background to ... out and pick up this challenge th... those already trained in DP disc... pline...

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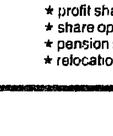

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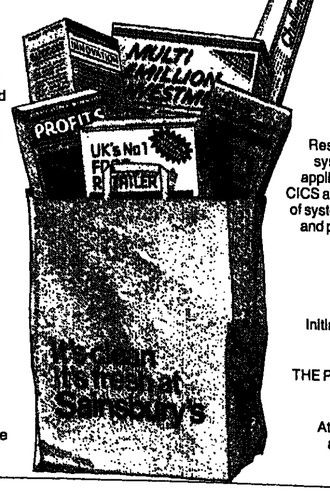

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Experience of the following would be advantageous:

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Expanding operation: West London and Milton Keynes

The name of Burroughs is synonymous with information management throughout commerce and industry. The success of our highly sophisticated data processing equipment and systems has firmly established us as a major mainframe manufacturer and supplier of both hardware and software.

The continuing growth of our operations and the development of highly advanced user systems now means that we need to maintain equally advanced internal management information systems to ensure our continuing operational efficiency in all areas.

We have recently reorganised our management information services function within the UK subsidiary based in West London with a Data Centre facility at Milton Keynes and have invested heavily in new technology to help us achieve our aims. But we also need to invest in suitably experienced personnel to carry through our ambitious programme of systems development. And that's why we are now looking for additional innovative men and women who have the necessary technical expertise, enthusiasm and high level of professionalism to play a significant role in our future growth.

There will be considerable involvement with personnel and departments within the subsidiary, throughout the Europe-Africa Division and close liaison with Detroit headquarters.

Our immediate needs are for:

COMMUNICATIONS SPECIALIST
– BASED WEST LONDON

Our Management Information Systems organisation supports a sophisticated network both within the UK and internationally and further developments include the establishment of a European node to the worldwide BNA/CSA network. For this appointment we are looking for a data communications specialist with experience of communications hardware and software facilities. A knowledge of British Telecom services and Burroughs data communications products would be a distinct advantage.

DATABASE SPECIALIST
– BASED WEST LONDON

Within the database administration area we are looking for a specialist who will be involved in the implementation and support of both existing and new database systems including the development of back-up and security procedures, systems optimisation and standards. A knowledge of Burroughs DMS II and GEMCOS is required together with some knowledge of B6/7000 systems and ALGOL or COBOL languages.

SYSTEMS ANALYSTS/ PROGRAMMERS
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To assist in the development, implementation and support of integrated on-line database systems. A minimum of two years' COBOL programming experience is required, ideally on Burroughs large systems, using DMS II. A degree level qualification is desirable plus an ability to communicate effectively with end-users.

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To work within the Technical Support Group at the Management Information Systems Data Centre at Milton Keynes on the support of system software for B6/7000 mainframes. We are looking for a Computer Science graduate with experience of Burroughs large systems who can operate on-call support to the Data Centre out of normal hours.

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To work on a five day week, two-shift basis with some overtime. Experience of Burroughs hardware is required and training on large systems can be provided as necessary.

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Burroughs

DEC/VAX

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PROJECT LEADER c£13K

In addition to a relevant qualification, the company is seeking applicants who have had at least 4 years Data Processing experience with one year in a supervisory role. A systems bias is required plus substantial programming experience. Reporting to the Data Processing Manager, you will liaise with 5 Analyst/Programmers. It is unlikely that candidates under the age of 30 will have the required experience.

ANALYST/PROGRAMMER to £10K

You will possess the necessary ability gained as a direct result of at least 5 years DP experience. Ideally, the company requires VAX exposure, however, strong PDP-11 candidates will be considered favourably. You will also have experience of database and text processing applications as well as BASIC and/or MACRO language jobs. This position offers genuine career progression.

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ANALYST/PROGRAMMERS to £12,000 minis & micros or VAX 11/750

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Whilst our larger systems will run on two VAX 11/750 mainframes, we wish to consider alternative, but complementary, mini or micro-based solutions for each given requirement. We already operate NIXDORF minis and a variety of business micros, but we are not restricted for choice regarding new hardware.

Consequently we now require 3 key staff to make this dual strategy really work:

THE NEW TEAM: Two capable and professional ANALYST/PROGRAMMERS will initiate and form the nucleus of the "alternative systems" team. With a background in mini/micro based business applications they will demonstrate a keen commercial awareness to produce flexible, cost-effective solutions. They should be confident at all stages of a project from initial research/analysis through hardware/software feasibility studies, to programming and implementation of the chosen system, always in close liaison with the user.

VAX: An experienced VAX ANALYST/PROGRAMMER is needed to strengthen the team. You will need in-depth BASIC programming experience within commercial applications, as well as an enthusiastic personality to fit in with the lively and very friendly department.

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For more details please contact our Recruitment Consultant JOHN GRAHAM, or send your C.V. to him at: CONQUEST RECRUITMENT, 93 Whitby Road, SLOUGH Berkshire SL1 3DR. Telephone Slough 821644 (evenings and weekends 0628-71922)

Newbury Data
A member of the DEC group

Data Communications for the Future

At a time when other companies were suffering from the effects of economic recession, our client was achieving remarkable growth from advanced product design and innovation. This thrust is continuing with many new products planned or under way. Research teams are probing new fields in signal processing, advances in chip technology and generally focusing on new product ideas. Developments in software and electronics use the most advanced aids with a concentration on UNIX-like systems and 'C' and extensive use of M68000 processors in current products. With vast power in CAD/CAM systems readily available to engineers, very complex new PCB's are designed and in production in remarkably little time. Sales are increasing, exports are buoyant, profits are up. More talented people are needed in every area to keep pace with expansion.
Salaries are in the range £10,000 to £18,000 with an emphasis about the mid-point of the range.

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* Multiplexor Dev. Engineer
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* Message Switch Designers S/W
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Herts based

Business Systems Analyst
South Wales to £15K+car

We wish to hear from experienced commercial applications analysts who can demonstrate a broad awareness of most of the usual commercial and business systems and who have been responsible for at least one major project. The successful applicant will be responsible for interpreting the needs of users in many separate company sites around the U.K., each with their own mini computer linked to a central mainframe. Willingness to travel and good liaison manner vital.

Database System Support
London to £11,000

This is a vacancy which should appeal to anyone already working with database management systems in a support role or in applications development but seeking the more dynamic environment of support work. Aged between 23 and 27 with a good technical understanding of DBMS, successful applicants will be responsible for such activities as technical consultancy, benchmarking, feasibility studies, demonstrations and exhibition work. An excellent opportunity to broaden your experience with a leading systems supplier.

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Berks. £12,000

We would like to hear from candidates who are fully conversant with the DOS/VSE operating system. Experience required is 4+ years using COBOL, some assembler would be useful as would any knowledge of CICS. The successful applicant will provide a user service on a proprietary package which covers all aspects of business related to international magazine subscriptions. He/She will provide assistance to the operations department in creation of JCL etc, for the IBM 4331.

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In the growth area of teletext, our client is a market leader with installations throughout the world. This field encompasses a variety of skills including computer hardware, terminal interfacing, communications software, video and bespoke development. 3-5 years solid experience of DEC PDP11 operating under RSX-11M and familiarity with RTL-2 or a similar block-structured, real-time language and with MACRO-11 are the prime requirements here. Most assignments involve periods of on-site installation and commissioning.

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Beds. £9K to £14K

A major computer manufacturer with an impressive range of products is continuing to expand its engineering centre and would particularly like to recruit more software designers and implementers into their Operating Systems and Languages Groups. There are a variety of projects planned, or under way which cover multi-access systems, UNIX system development, compiler and supporting software design. There are positions from Programmer to Team Leader depending on experience. Relocation assistance is provided where appropriate.

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In the field of office automation, our client is a world leader with a range of fully compatible, high technology information processing equipment. We are seeking a hardware engineer to provide engineering support to development teams within the R & D Division. Responsibilities will include evaluation of change requests, report findings, components and sub-assemblies and reporting the results to the design authority. Successful candidates will be experienced in logic design, analogue and digital electronics, communicative and self-motivated.

Software Engineer
Norwich £8K to £10K

Ideally you will be degree level with technical programming experience in assembler and Pascal, or similar. Any experience with UNIX, data acquisition and logging, desk top computers, MDS's and imbedded systems in measurement and control instruments would be useful. Hardware level ability for interfacing with IEEE 488 controllers, logic analysers and test equipment rigs. Your work will cover design proposals, feasibility studies, documentation, implementation, test and verification. Excellent career prospects and relocation assistance where appropriate.

Graphics Sales Support
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This client's products occupy a leading position in the sphere of high resolution, colour graphics terminals. The person we are seeking will have a good client contact maner. When not providing a technical support service to clients you will be expected to participate in product development. Experience from at least two of the following areas is necessary: Intel 8086 assembler, CP/M internals, Pascal, PDP11 or VAX, device drivers and communications protocols. Any graphics knowledge would be useful.

Micro Systems Software

Design and Development

Enthusiasm, dedication and energy abound in this company. Small in numbers (115) with remarkable successes in overseas markets, its products are adopted by most of the household name companies in the micro-computer world. Having established its reputation with the 8 bit CP/M product range the company has enhanced its range into the UNIX and MS-DOS market. The provision of a commercially widespread language like COBOL to the micro market and the addition of sophisticated development aids and friendly, interactive debug tools required top level designers and developers with initiative. New facilities with advanced personal computers at everyone's finger tips have been provided to ensure that the company can continue to attract the most talented software people available. Main skills being sought are UNIX and 'C' programming ability, technical programming on micros or minis, compiler design, assembler programming on micros or minis.
Salary will not be a barrier to recruiting the right people.

* Project Leader, Compilers
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* Designer – Code Generation
* Compiler Support Specialist
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* COBOL Q.A. Programmer
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* Installation Engineer
* IBM VM/CMS Specialist
* 'C' UNIX Enthusiasts

Berks based

Open letter to experienced computing staff seeking new opportunities

Our free service to you is advice and assistance in identifying the most suitable new position for the development of your career. Our consultants have held a variety of responsible positions in the computer industry. With this experience and their knowledge of the job market they are available to help you. The advertised vacancies are only a representative sample of the many that are regularly registered with us by our clients. Write or call us anytime to discuss your ideas.

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(Applications are open to both male and female candidates)

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JOBS IN THE CITY OF LONDON

Benefits of a job in the 'square mile' are substantial – and this is reflected in low staff turnover, says Margaret Park

Computer people stay where the money is

THE City's square mile may hold the highest concentration of money in the country, but its relative prosperity has not produced any more jobs for computer staff than appear elsewhere.

Most employers in the City of London report a low turnover of staff, which is a reflection, they think, of the security and benefits attached to jobs there, most of which are in high finance.

Benefits for staff employed by banks or insurance companies are substantial, the most famous being the cheap mortgages offered by banks to attract employees. And a 5% interest rate on home loans – less than half the usual rate – adds considerable value to ordinary income.

City computer staff obviously know when they're on to a good thing. All indications are that they stay in their jobs longer than computer staff in other industries. Compared with computer departments dependent on manufacturing to supply them with work, the money business is at least secure.

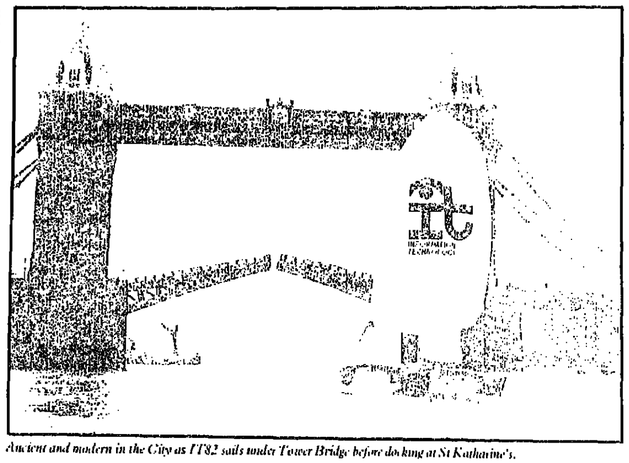
Computer services companies in the City rely largely on business from the banks, Stock Exchange and insurance brokers.

Rolfe and Nolan Computer Services in Bishopsgate, for example, provides computing power for the City's commodity brokers, but this specialisation makes the hunting of suitable staff an uphill task.

Graham Plant, programming manager with Rolfe and Nolan, said knowledge of the commodities market was as valuable in his computer department as any technical experience.

"This knowledge is very hard to get hold of," he said. "So we don't mind if applicants do not have the right systems experience; we'd rather have an understanding of business.

This understanding of the industry is most important at the level of systems analyst, which is where recruitment problems begin.



Ancient and modern in the City as IT82 sails under Tower Bridge before docking at St Katharine's.

"The people with the right amount of commodities knowledge tend to be fairly well on in management positions and not keen to give that up to go back to systems work," said Plant.

The outcome is a compromise in which Rolfe and Nolan has to set its sights a little lower. Even more money is apparently not enough to attract computer people away from long sought-after management positions.

Plant echoed the general opinion among City employers that staff tend to become entrenched with one company and reluctant to give up a good number. The more senior the level of recruitment into computer departments the harder it is to get staff of the right quality.

A large number of City firms are foreign-owned and the high salaries offered make them that much more demanding when it comes to skills and experience.

Jack Watkins, administrative manager at the American Foreign Insurance Association, said: "It's what people are capable of that counts with us. We expect them to be able to use certain skills in certain ways.

"CICS is a good example," he added. "A lot of computer people will say they know it, but we don't think it's sufficient to use it on a screen without understanding how and why it does what it does."

American Foreign is US-owned and, according to Watkins, salary levels are structured so that an analyst programmer with the company is expected to have a considerable knowledge.

As an example of the City's low staff turnover, in the past 12 months only four of American Foreign's computer staff have left and all did so because they were anxious to move back to the part of the country they'd originally come from.

"We rarely lose people to rival financial organisations in the City," said Watkins. "Those who do go are usually at the top end of the range looking for their initial management posts."

Barbican Computime Services is a software house serving the banking and accounting communities and again extra skills are needed from would be computer staff. A large part of the business consists of a micro-computer auditing department where a number of the programmers are ex-accountants.

According to the personnel department they are attracted by salaries equal to what they could earn as accountants, and a turnover rate among them is low.

Rolfe and Nolan will be looking for nine staff over the next six months because of a new short-term software project to back commodity broker clients.

Eight extra staff have been taken on so far this year, and next year the system is ready for back-up and bureau at the end of next year staff will be needed for testing and enhancement.

City computer staff obviously know when they're on to a good thing. All indications are that they stay in their jobs longer than computer staff in other industries

A large part of the work in the tailoring of software to user needs – work which is increasing as the company's business grows.

Provident Life Association of London has been recruiting in the past nine months but is also involved in a lengthy programme to relocate its computer centre from Bromley to Dorking.

A year after the initial decision to move, the necessary building at Dorking is still has not been purchased, so the move proper is at least two years away.

The company has been recruiting staff with ICL background either DMS or VME. Staff are expected to have good commercial experience and to put in order to the Provident puts the decision for experience with ICL in second place.

Margaret Park is deputy editor of Computer Talk.

Kango Wolf Power Tools are the UK's leading manufacturer of professional power tools with an international reputation.

Present hardware is based on a maximum configured System/34 and 3 Megabyte model 7 System/38. The two machines jointly supporting a wide range of accounting, commercial and manufacturing systems using the IBM MAAPICS package.

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(6434)

Assistant Engineer
Real Time Computer Systems

POTTERS BAR up to £11,793

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This post will suit recently qualified graduates (or others who meet the educational requirements for Chartered Engineers), possessing a few years' relevant experience.

Travel throughout the Region will be necessary, and a current driving licence is essential. The work also involves a commitment to take part in computer maintenance standby/call-out arrangements, if required.

Salary will be in the range £10,337 – £11,793 (including Metropolitan Weighting Allowance). Benefits are those normally associated with a large progressive organisation.

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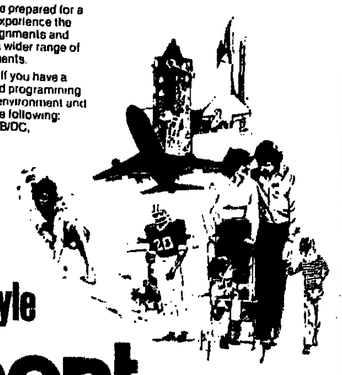

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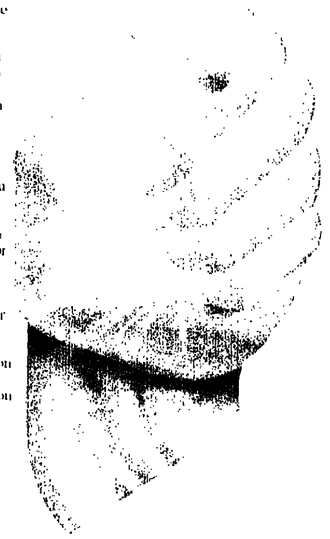

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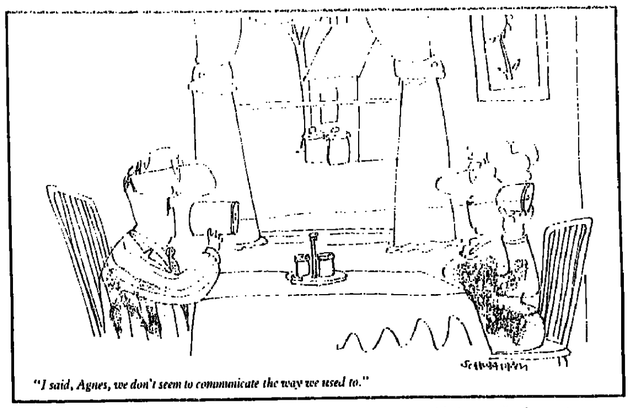
JOBS IN COMMUNICATIONS

Threat to jobs as telecomms industry expands

Employment will be mainly for the specialists, reports Margaret Park



"I said, Agnes, we don't seem to communicate the way we used to."

THE UK telecommunications industry, despite the efforts of the Post Office Engineering Union (POEU), is set for expansion. But this isn't to say that the union's worst fears are not justified.

Telecommunications business will probably grow, but few of the job opportunities will be in the maintenance and servicing sector supplied by POEU members.

As technology advances, staffing for the day-to-day business of maintenance will decrease. Jobs on offer will be for specialised telecommunications skills such as microwave and optical fibre techniques and for project design involving a combination of telecommunications and computing skills.

Like so many industries, job quality in telecommunications is being upgraded, and more skilled staff will be needed. Fewer, however, will be required for the servicing and operations functions.

British Telecom plans to have taken on around 200 extra staff by the end of this year, a figure which has been the norm for the past five or six years.

Computer development staff are concentrated in BT's three development centres in Cardiff, Ipswich and London and staff are needed in all grades from operators upwards.

The company divides its intake fairly evenly between experienced staff and trainees but rarely takes on arts graduates straight from university for programming jobs.

"Our milk round concentrates on science and maths graduates," says Rikki Herd, BT recruitment manager. "We look for potential management skills and a commercial and technical awareness," she adds.

Arts graduates can get into BT's computer departments but only as careers changers, possibly after taking TOPS courses in programming. A few A-level are taken on straight from school to be trained as programmers, but BT says its recruitment policy has changed gradually over the past few years to include more experienced staff and fewer trainees.

"Taking experienced staff enables us to be more flexible at short notice, "said Herd. "When demand for work is great, having skilled people already available means we can be more immediately effective."

BT reckons it takes between six and 12 months to train a newcomer. All newcomers undergo a four-week introductory course. The first two weeks are an introduction to BT, followed by two weeks learning Cobol.

After four weeks, trainees are expected to work as part of a project team under supervision, with extra lectures and training courses to attend over the following year.

Salaries are perhaps a little above average in BT. A brand new graduate trainee programmer can expect to start on £6,300 in the regions and £7,600 with London weighting. At 26, with some experience, programmers are paid £9,400 or £10,700 in London.

BT expects that the coming decentralisation of its computer operation (as a result of the government's privatisation of the company) will produce a need for more computing staff in the planned autonomous regional centres.

"It's likely," says Herd, "but there's been no firm decision and we can't say when extra people may be needed."

At present, BT computer staff don't switch location unless the company has to move them to another development centre but it is expected that this may change with decentralisation next year.

Staff will be able to seek promotion by moving between BT's new profit centres.

A number of development people are in the process of being moved from London to Cardiff or Ipswich because of the expense and scarcity of accommodation in London.

BT will consider moving its operations staff into programming but says that when they apply for programming jobs their success rate is lower than outside applicants.

Operators can make the move after two years' experience but one of the big stumbling blocks to their progress is reluctance to change locations. The demand for operations staff is concentrated in Central London, Harmondsworth, Ipswich and Cardiff.

Few new recruits are put to work on System X development, but computing staff can move into this area of the business after gaining some experience elsewhere.

Mercury Communications, the rival business voice and data communications service will be taking on about 130 staff over the next 12 months. About that number are already employed and the first recruits to Mercury were seconded from its three parent companies: Cable and Wireless, British Petroleum, and Barclays Merchant Bank.

Recruitment needs in Mercury are divided into three categories. The biggest is for sales and marketing staff, a large number of which are being taken on from computer manufacturers or related businesses.

Specialised telecommunications people are needed with skills in microwave and optical fibre work plus project planners whose experience should include leading large teams in long-term projects.

Mercury is keen to take project people from outside industries in civil engineering or petrochemicals, not because experience of those disciplines would be a help, but because development work in those areas has been of a similar scale.

Straight computer staff are in the minority at Mercury. At present, the Covent Garden computer room houses a Digital Equipment Vax machine and is staffed with just one data processing manager and an assistant.

Mercury is being careful not to antagonise BT and the POEU by attempting direct recruitment.

But nevertheless, the company expects that a fair number of applications from BT staff will come in for jobs soon to be created at Mercury's regional offices. Only two of these exist at present, in Birmingham and Warrington, but the recruitment pattern for the next 12 months will change as more are opened.

Margaret Park is deputy editor of Computer Talk.

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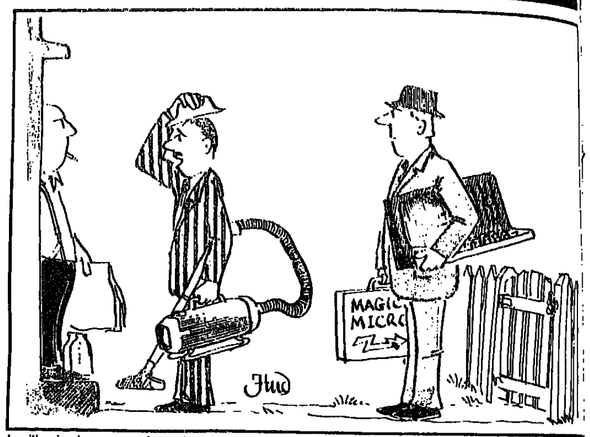
JOBS FOR SALES PEOPLE

Compec—a great chance to look for a new boss!

It's a time to size up rivals, says Alan Williams



COMPEC is with us once again, with all its clamour and excitement, the upsets and disappointments. For me it's a very special event, for it is an occasion when the industry not only presents its wares to the world at large, but also to itself. It is a time for renewing relationships with old friends and old enemies.

It is a necessary exercise in getting back to the reality where your product is not the only good one available and yours is not the only market sector with problems and opportunities.

In many ways, Compec can be disappointing and frustrating. Particularly in recent years with the myriad of cloned microcomputers, it becomes increasingly difficult to drum up much enthusiasm for the launch of yet another micro. If only exhibitors would concentrate on methods for increasing the visual impact of software and improving the means of presentation.

When you're wandering around an exhibition one printer output looks much the same as another. One could easily pass by a listing of all the secrets of the universe without giving it a second glance.

For sales people as well as exhibitors, Compec is a time of very tiring work, with exposure to an extreme of situations from boredom to harassment. It is also an opportunity for discovering what the competition is up to, and making the inescapable comparisons of products, as well as noting how the stands compare in terms of visual impact and product literature.

In such circumstances it is difficult for sales people to avoid the comparison of one company with another as a potential employer. Even if there is no intention of abandoning current employment, it is still interesting to make a mental note of those companies which appear attractive and those to be avoided at all costs.

If there is frustration about the shortcomings of a product or the limitation of a product range it can be illuminating to see how the competition is approaching the situation. Maybe a change of employer won't solve the problem after all!

A particularly interesting aspect of Compec, for me, as a recruiter of sales and sales support staff, is that it occurs at a time of year when two significant but amorphous events are taking place. First, it is a period when sales budgets for the coming year are being resolved and sales managers begin to realise the probability or improbability of making quota for the current year and the relative expediency of changing employer.

On the other hand, it can also be the time when targets for next year are revealed; this year's performance is forgotten, and the predominant inclination is to flee in horror.

So, what is the current situation for those people who are considering a change?

Well, as ever, there are many forces at work, and it would be unwise of any salesman to ignore them. Take the relative growth of particular market sectors for instance. Some areas, such as the service bureaux, appear to be in general decline, although it has to be said that some specialist operations, particularly those which have responded to changes in technology, are still doing well.

The biggest benefit to sales people of working in this area is that they have to develop a good understanding of computer applications at the problem solving level. However, it has to be said that, in general, remuneration is less than the industry average.

Sadly, the support of competent sales people does not grow significantly because the industry, by and large, is neither producing new ones nor properly training those it already has. Consequently there is too much demand for sales people who have proven ability to succeed

Other areas, such as mainframes and large-scale minicomputer systems are in a relatively becalmed situation. As the value of the £ increases and the number of users does not grow significantly, the large companies do battle over a static market whilst struggling to develop their bottom end.

Nevertheless, these companies provide the best career opportunities for many young sales people in particular, for they are virtually the only companies with the resources and commitment to provide sales training and contribute to career development.

In contrast some sectors of the industry appear to be doing very well. The communication systems sector continues to expand with a continuing demand for competent salespeople. CAD/CAM appears to be advancing now, after a slow start, and business is booming. For example, one of our CAD/CAM clients had only two out of 11 salesmen below target in the last fiscal year. And average earnings were around £42,000 per person!

The microcomputer market is a strange one. As far as I am concerned, the best job opportunities in this area are with the manufacturers, selling to agents and distributors. Selling at a lower level can be precarious.

It seems that everybody and his dog is, or is about to be, a turnkey microcomputer company. There has been a lot of attention in this area already and there is bound to be more. Apart from this, most small employers do not have the resources to provide the facilities and assurances that are necessary for career development. My own feelings are, if you must work for a micro systems supplier, why not do it yourself?

For me the biggest unknown quantity is the so-called electronic office. Everybody says this is the biggest area of opportunity but everybody seems to have a product on offer but few seem to advance beyond word processing or electronic mailing.

Perhaps the pay-off is yet to come, but as a salesman I would prefer to hedge my bets and deal with a supplier whose sales opportunities are not limited just to their business.

Sadly, the supply of competent salespeople does not grow significantly because the industry, by and large, is neither producing new ones not properly training those it already has. Consequently there is too much demand for salespeople who have proven ability to succeed.

This creates a very productive situation for headhunters (as opposed to agencies and consultancies). Those sales people seduced by this siren call should bear in mind the wisdom of not leaving a job until the task for which they were originally employed is completed. Nothing is likely to destroy personal credibility more than leaving an employer in the lurch or more to the point, leaving a job too soon.

It should also be remembered that a headhunter typically makes contact to offer a particular job with alluring dialogue like: "You have been identified as the ideal candidate"

Why limit yourself to a single opportunity? If you really do feel it is necessary to change employer speak to a reputable professional recruitment consultancy, and if they can't offer you at least half a dozen options, you'll know you've selected the wrong one!

Compensation packages haven't changed much over the past year. The industry average for on-target earnings is around £25,000, with a 50/50 split between base salary and commission, plus company car. However, this covers a wide range of possibilities.

The good thing about Compec this year is that it comes at a time when the market is suddenly more confident and buoyant. That's a nice situation for all sales people, whatever their product.

However, as one of my colleagues Roger Doyle recently quipped, if you're in magnetic-stripe accounting machines you could be in real trouble!

Alan Williams runs Intab, a sales training and marketing consultancy. Intab Management Services Ltd, Marketing Services Limited, 30 Oxford Street, London W1R 1RE. Price £10 including postage.

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H/W Engineering Supervisor

Nottingham: Salaries to £10K

A Networking Systems Distributor requires a Hardware Engineering Supervisor for a key role within its rapidly expanding Operations Department. The successful candidate, aged 25-45 years should have completed an engineering apprenticeship and have a minimum of 3 years hardware experience with mini or microcomputers, preferably in a development or service role. Your current or recent background should include two or more of:— Quality assurance and control, CAD/CAM or NC products, UNIX or CP/M based systems, data communications and protocols, hardware/software interfacing. Candidates will lead an established small project team and be responsible for the co-ordination and supervision of Hardware Systems Engineers. Man management skills and the ability to work to exacting product delivery dates are of great importance. You will also be required to travel to clients' site within the U.K. Ref: L/44/A

D.E.C. Comms Systems

London & E.E.C.: Salaries to £16K

Our client, a major supplier of D.E.C. based turnkey systems, has a number of vacancies for Communications Software Engineers to join either its London or Dutch-based operations. Suitable applicants will, preferably, have two or more years programming experience in a distributed processing environment where proprietary networking systems such as DECNET have been utilised. Applications are, however, sought from those with fluency in MACRO 11, RT11-2 or Intel Assembler, irrespective of the environment in which their skill have been gained. Of particular interest will be candidates who have been engaged on the development of interface software. Ref: L/44/B

UNIX Applications Engineers

London and Midlands: Salaries to £11K

A highly respected supplier of UNIX based Microcomputers Systems and Networks is currently seeking to recruit a number of exceptional Applications Engineers for its London (City) and Midlands based operations. Applicants, aged 25-40 years, should be qualified to HND level or degree and/or have a minimum of 3 years relevant practical experience in a UNIX, CP/M or financial accounting environment. Your programming background must include fluency in two or more of 'C', PASCAL, FORTRAN, COBOL or Business BASIC. Those candidates fully familiar with U.K. accounting practice and also having a current background in financial or systems analysis are especially encouraged to apply. It would be advantageous if applicants had re-ed or implemented a relational database (e.g. DBASE II, INFORMICS or RAPPORT) in a business environment. Since all positions entail a significant degree of client contact in the form of product demonstrations, seminars and on-site client training, our clients value well developed inter-personal skills. Additionally, candidates will be expected to visit clients' sites in a pre or post-sale support role. A willingness to travel within the U.K. as and when necessary is therefore of paramount importance. Our clients offer a competitive salary, generous Company benefits, and outstanding career prospects. Individuals, who feel that they meet the specification outlined should either forward a well documented resume or, alternatively, telephone one of our Consultants quoting Ref: L/45/B.

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Real-time Analysts and Programmers, with at least 2 years post graduate industrial experience, are urgently sought by a leading software consultancy. The broad range of projects they undertake, ranging from advanced defence systems through to office automation products, guarantee a varied and stimulating working environment. Your software skills should include substantial real-time programming on a block-structured language and an Assembler, combined with a knowledge of the utilities offered by operating systems such as RSX, VMS or UNIX. For those applicants with man management experience, or potential, rapid promotion is highly likely. REF: L/44/C

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London: Salaries to £15K

A leading U.K. Systems and Software House is currently seeking **Programmers, Designers and Consultants** for its London-based industrial division. All applicants should hold a numerate degree and be fluent in an Assembler and a high-level block-structured language. There is a strong preference for candidates who are familiar with PDP 11, VAX11/780 or HP 3000 hardware, but candidates who have real-time software development experience on other mini-computers should not be deterred from applying. For the positions of Designer and Consultant, it is anticipated that you will have a background in process control applications, particularly within food, drugs or energy industries. Ref: L/44/D

CORAL 66 Programmers

S.Home Counties: Salaries to £11K

Applications Programmers and Designers are currently required by the software development division of a leading Systems Supplier. Suitable applicants should offer a minimum of eighteen months CORAL 66 programming experience in a real-time mini-computer or micro-processor environment. Particular hardware experience is not important, but familiarity with PDP/11, VAX, Ferranti Argus or the GEC 4000 series would be a distinct advantage. Our client offers an excellent training programme and there will be every opportunity for successful applicants to learn new skills and progress into either a Management or Consultancy role. REF: L/44/E

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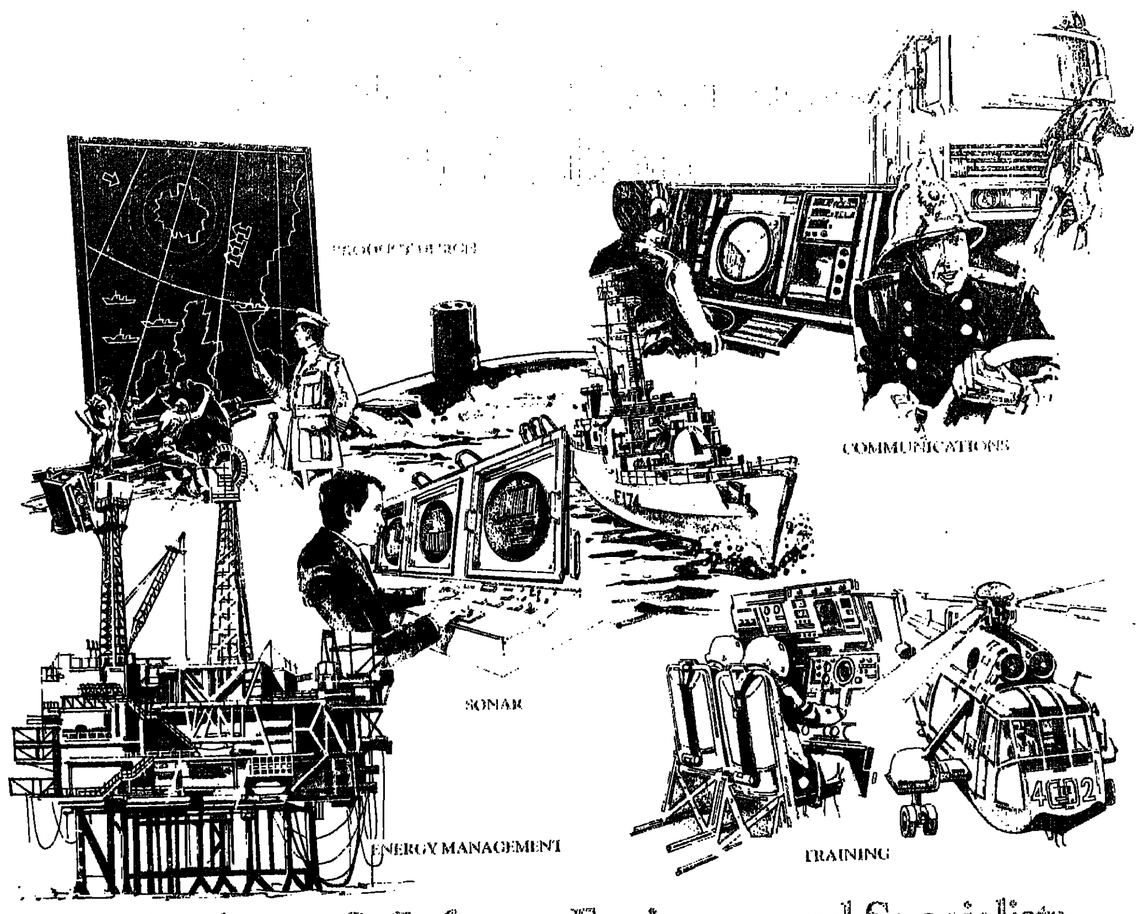

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JOBS IN THE HEALTH SERVICE

A switch to Britain's biggest business can be a healthy move

Les King looks at a service with a 10-year-old high technology workload

GIVE or take a few spending cutbacks, the annual turnover of the National Health Service is running at around £15 thousand million, almost certainly making it the country's largest and most complex business.

Although it is unusual to think of the Health Service in terms of commercial computing, any organisation of this magnitude obviously has a massive data processing requirement in such areas as payroll, accounts, stock control, purchasing, budgetary control and manpower planning.

At the same time, there are a number of more specialised applications which, in addition to maximising the use of limited NHS resources, make a direct contribution to improving the standards of health care.

The vast array of specialised applications include hospital administration, real time patient monitoring, online analysis of laboratory results and the production of statistics covering nearly everything from drug quality to the "throughput" of individual hospitals.

Since the 1974 reorganisation, the main responsibility for providing computing services in England lies with the 14 regional health authorities, each of which operates a regional computer centre serving a region covering two or three counties.

In a typical health region containing over 300 hospitals, clinics and health centres, the enormous data handling requirement calls for the use of the most up-to-date computing techniques including telecommunications, database management, electronic mail, private viewdata and distributed processing using both minicomputers and micros.

Unlike many DP departments most of the regional computer centres can foresee a high technology workload stretching at least 10 years ahead, although computing strategy is kept deliberately flexible to accommodate new developments such as the micro, the impact of which would have been impossible to predict only three or four years ago.

One of the most exciting and innovative commercial projects within the NHS is the development, by the North-west Thames region, of an integrated database embracing all payroll, manpower and finance.

After a two-year period of basic planning and data analysis by a mixed team of computer centre and user personnel, departmental manager John Arnold is convinced that the days of separate payroll, personnel and accounting systems in the NHS are numbered.

The project is based on an ICL 2966 mainframe using IDMSX/TPMS and, to give some idea of scale, the first phase covering payroll/personnel functions will require some 4,000 megabytes to store a year's information.

Although the gestation period of this project could be up to five years, Arnold believes that the data modelling approach will make the building of functional programs extremely easy while avoiding the need for large-scale redevelopment in the future.

It is also likely that the work will result in a set of transferable systems with potential application in other health regions.

South-west Thames region is a fairly new authority which has built up its 125-strong data processing team over the last seven years.

Having completed the development of basic batch commercial systems based on ICL mainframes, the regional computer centre has embarked on its first major venture into distributed processing which will involve the installation, in stages, of DEC Vax minicomputers at major hospitals within each of the region's 11 district authorities.

Initially, these will be used for patient administration systems whose principal function is to provide hospital staff with online access to an appropriate patient records database, eliminating a time consuming flow of paperwork around the region's hospitals.

Related systems, ranging from the online analysis of laboratory tests to the control of bed occupancy and out-patient appointments, are designed to speed up the whole process of admission, diagnosis and treatment, reducing waiting lists by making hospital resources more rapidly available.

Within the next few years, the Vax hardware will also form part of an integrated mainframe-mini-micro network supporting some 2,000 terminal devices.

These developments have also generated a number of new job functions and the computer centre's current organisation includes specialist teams for user support, education, technical support, database, network control and microcomputers as well as applications project teams covering medical systems, finance and manpower/supplies.

Microcomputers are making a major impact within the Health Service, providing dedicated processing for the many ad hoc applications whose development and running costs would be unrealistic using traditional hardware.

There is huge potential for computer systems development in the NHS and a detailed description of current applications would probably fill several books. Contrary to common belief, the DP professional joining the NHS will not necessarily lose experience of commercial systems which are to be found on a somewhat larger scale than in most other organisations.

At the same time, there are plenty of opportunities to work on specialised, and possibly more interesting, applications while safeguarding future career prospects by keeping a foot in commerce.

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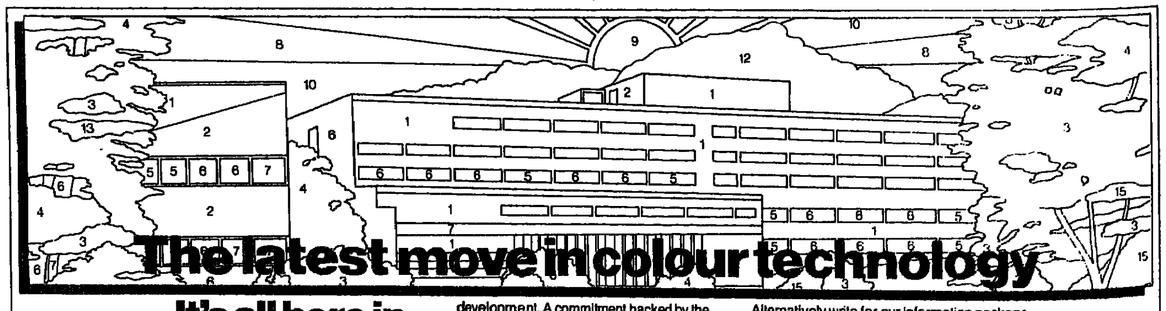

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Alternatively write for our information package enclosing a brief CV to: **Stephen Smith, Resourcing Manager, Crosfield Electronics Ltd., Holloway Road, London N19 3JG.**

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Applications are invited from computer science or technology graduates to fill a newly created role spanning, in the first instance, the Electrical and Mechanical Engineering disciplines. The successful applicant will work in close co-operation with staff and students of both departments in an advisory role, but will also become deeply involved in both hardware and software developments. The ability to programme in microprocessor assembly language as well as higher level languages is essential, and experience of interfacing both analogue and digital equipment to microcomputer systems would be an advantage.

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Further details and application forms from the Deputy Head of Personnel, Brighton Polytechnic, Mouslecoomb, Brighton BN2 4AT. Tel: Brighton 693655. Closing date 28 November 1983.

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To apply please send a full C. V. quoting reference number 192 and give the names of two referees to Jane Walley, Personnel Officer, Celltech Limited, 244 Bath Road, Slough, Berkshire SL1 4DY.

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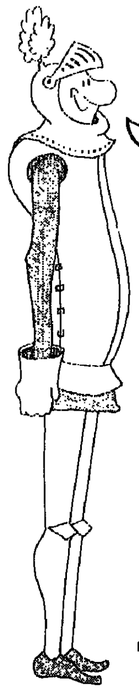

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Please write enclosing details to:
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Or telephone 021-359 0854

JOBS FOR PROGRAMMERS AND ANALYSTS

Private prospects take a turn for the better

Philip Hunter discerns a greater willingness to change jobs now that the recession is easing

IF good news is not worth reporting, then this article might as well end here. For any analysts and programmers seeking work in the private sector will find that prospects are brighter than they have ever been, with recruitment agencies reporting a sharp upturn in demand from employers.

At the same time, people are more willing to change jobs than they were during the depth of the recession, which means more opportunities for promotion and pay rises. Increased mobility also increases the number of jobs advertised in the public sector, although here the total number of jobs available is unchanged.

"We have noticed a fairly considerable increase in activity," confirms Anthony Lambie, marketing director of VLI, the UK's largest computer recruitment agency group.

Keith Roland, manager of systems and programming for the London-based agency KPG is more emphatic. "We saw an enormous burst of vacancies in mid-September, much more pronounced than usual."

And Neil Williams, permanent recruitment manager for Knight Computer Services, says that the market was picking up well even in the usually slack months of July and August.

The increase in recruitment for permanent jobs in the UK's private sector seems to be pretty widespread covering all the regions and most applications and types of hardware. But Williams says that the increased demand in the commercial sector has come mainly from computer services and manufacturing as opposed to banking and insurance. People working for banks and insurance companies tend to stay in their jobs because of perks, like cheap mortgages, which can make it expensive to leave.

But most agencies agree that the biggest increase in recruitment has come from companies involved with real time industrial and scientific work. "In my own little corner of the computing world, the market improved tremendously", enthuses Beryl McLaren of Jupiter, a recruitment agency which specialises in real time applications.

Permanent recruitment has improved because projects frozen in 1982 have been restarted, and restrictions on head counts at some firms have been relaxed.

"In March and April, companies started saying, 'Right, I've got the budget now'," says Lambie of VLI. "Clients had been saying that they were short of staff, but had no authority to make up to head count." This meant that contractors were taken on for work that would normally be done by permanent staff.

So the recent removal of head count controls prompts the question: has the increase in demand for permanent programmers and anlysts been accompanied by a corresponding drop in vacancies for contractors?

Not a bit of it, according to Lambie. Quite the opposite in VLI's case, with the rise in vacancies for contractors even more pronouced than for permanent programmers. Lambie says that the tide against contractors resulting from lifting of head count restrictions has been overwhelmed by a huge demand for contractors for new projects - either to fulfil peak requirements or for specialist jobs.

But Alan Bentham, director of London West Computer Recruitment, says he has not noticed a particular surge in demand for contractors. The situation with contractors is not so clear cut as for permanent people, although the consensus of opinion is that their lot is also happier than it was.

Recent recruitment policy has created the interesting anomaly that people with two years' experience are in much shorter supply than those with three or four years. This is because very few trainees were taken on at the trough of the recession two years ago.

The result is that programmers with two years' experience, especially with IBM hardware, can change job easily now, with a good chance of a big rise in salary. But with four years' experience it may only be worth changing jobs if an interesting opportunity arises.

IBM has slightly increased its dominance of the commercial mainframe world in the past few years, and programmers with experience of Cobol on the IBM 3000 or 4300 series are popular animals at the moment. Add experience of CICS, IMS, or DL/1, and you can afford to be choosy indeed.

Demand has also risen steadily over the last two years for RPG programmers on IBM's so-called GSD minis, the System 34, 36 and 38. Recently a recruitment agency, March Computer Recruitment, was set up just for this part of the market. Another agency set up to cash in on the growth of a particular sector of the market is London-based CAD Search.

The agency specialises in computer aided manufacture and design (CAD/CAM) where there is a shortage of skilled analysts. CAD Search has recently advertised a variety of CAD/CAM jobs in *Computer Weekly*.

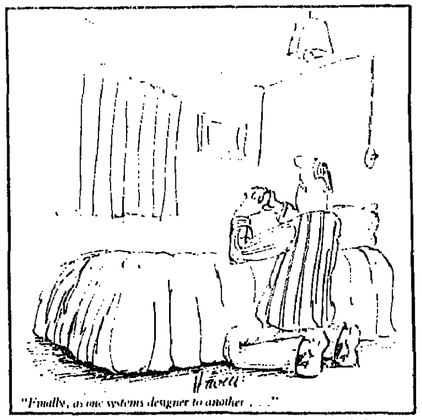
Most of the big agencies handle real time recruitment, where prospects for programmers have been good for several years, but are better than ever now.

There are two parts of the real time market: commercial and defence. The highest salaries are to be found in the commercial part, which includes process control and robotics. Agencies are reporting difficulty filling vacancies for these applications, with a shortage of people with experience of real time programming.

But Roland of KPG points out that this shortage in the commercial real time market is only an apparent one caused by companies being very choosy. "Most real time companies want specific experience."

On the defence side of the real time market, the situation is a little different. Companies in this market like Racal, Marconi and Ferranti are desperate for good people, but have had to relax their standards a little to get a steady influx of staff. "Some are taking on more graduates and people in other technical areas," says Bentham of London West.

The trouble is that the big defence contractors are still not paying the best salaries, and are finding it harder to compete for staff as the defence contracts keep rolling in. For the same reason, defence contractors find it hard to keep staff and are having to introduce inducements like overtime pay to compensate for the low salary levels.



"Finally, as one systems designer to another . . ."

For the aspiring real time programmer however, these defence specialists offer a great opportunity of learning the real time skills so much in demand. You can always move on to a better paid job after gaining the necessary experience.

For the agencies, recruitment in the military market is something of a nightmare. McLaren of Jupiter admits that these vacancies can prove impossible to fill, and she sometimes has to headhunt rather than rely on advertisements.

There is the added complication that security clearance is often needed, which takes several months.

Recruitment advertisements are now appearing for programmers of the language Ada developed for defence applications by the US Department of Defence. Most of these jobs are not directly linked with defence however, and involve development of compilers or the language's operating environment.

Mention of the Unix operating system is also creeping into recruitment advertisements. Unix is being adopted on machines of all sizes including the Cray supercomputer, but is chiefly found on minis and micros for multi-user operation. Software support specialists with Unix experience are much in demand.

The finance industry is a good bet for analysts and programmers not keen on the real time world. Many banks, insurance companies and building societies are now expanding their computing staffs.

Permanent recruitment has improved because projects frozen in 1982 have been restarted, and restrictions on head counts at some firms have been relaxed

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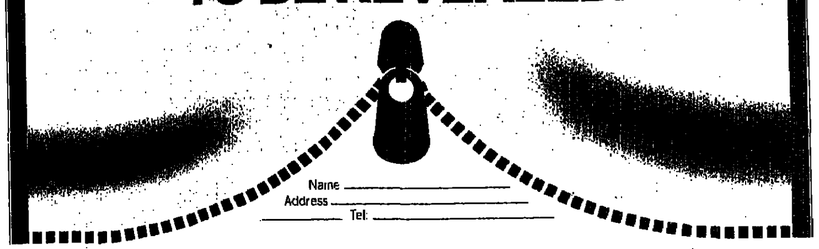

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Applications giving full details of qualifications and experience should be forwarded to the Personnel Officer (Recruitment), CEGB, South Eastern Region, Bankside House, Sumner Street, London SE1, quoting the appropriate vacancy number to arrive by 25th November 1983. (6377)

Central Electricity Generating Board
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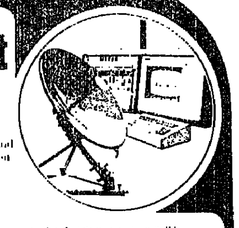

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Applications with detailed career histories should be sent to the Personnel Manager, at the address below.

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JOBS IN SYSTEMS HOUSES

Systems houses keep a low profile

Systems and software houses are finding it hard to get experienced staff. So they're digging in, says John Riley

SYSTEMS and software houses are having difficulties finding experienced staff. Those with experience are digging in where they are and need a lot of persuading before they will budge.

There are two reasons for this situation. The industry is getting older, and more security-conscious, and the job-hoppers of the 1970s are settling down as their children start going to school. That accounts for scarcity of staff with much experience, and there is the perennial shortage of staff with two to five years' experience brought by the old problem of training failing to keep pace with expansion.

Job-hoppers of the 1970s are settling down as their children start going to school

Despite the recession, systems and software houses are experiencing difficulties in finding good administrative and sales staff, as well as experienced analyst programmers.

Houses usually know what they want, and the largest ones often demand a minimum of four to five years' experience. They tend to find their own staff rather than recruit through recruitment agencies.

"Most software houses specialise in one area or another, for example, in banking or insurance," said Jan Cole, of agency Knight Programming Support, "and they want people with a strong background in those areas. They are looking for specialised people, not necessarily on the software side, but on the environment side."

Richard Milsum, head of the specialist IBM small business system recruitment agency, March Computer Recruitment, says: "Software houses are eternally short, but most of their people come from user sites."

Ian Townsend, personnel manager of Scicon, has observed increasing difficulties in attracting staff and has noticed that several companies are resorting to unusual methods to attract them: "One is pushing leaflets through doors in Hemel Hempstead," he says, "and I wouldn't be surprised to see someone walking down Oxford Street with a sandwich board advertising for computer staff soon."

There are four companies in the Scicon group which employs a total of 900 computer related staff. Townsend finds that the hardest group to find is people with two to three years' experience since graduating.

"The post-Falklands period has produced an additional demand for staff in the defence market," he added, "and people with IBM skills continue to be as marketable as ever."

Townsend believes that companies will have to pay more attention to training: perhaps too many companies are wanting people to join and then be effective the very next day," he said.

Logica, which recently became a public company, employs over 1,200 staff, and is also finding a shortage of good people with five or more years' experience. Logica plans to take on 250 staff this year, of whom about half will be graduates.

"We are looking for good technical skills with experience in a range of hardware and product environments, and we are also looking for the personalities to respond to a pressurised career environment," said a Logica spokesman. "We don't want people who will sit back and wait to be told what to do."

Some smaller companies in favoured locations do not appear to be having any great difficulty in finding staff, however. Scan Data, the Sussex systems house took on 20 new staff this past year, mainly in software or engineering support.

"We have no problem in finding the right sort of people," said Scan Data's managing director Steve Russell. "Good programmers are not very difficult to find in our catchment area. Many of them commute up to London and are glad of the chance to work locally. What is difficult then is finding middle management."

Hoskyns, the major systems software house, has branches throughout the UK and also has problems recruiting managers. "There is a shortage of quality candidates in the middle and higher echelons of the business," a spokesman.

"Getting good project managers, account managers, salesmen, and so on is a problem. I find it incredible that we offer salaries and then don't get a speedy response. We are always delighted to get our hands on people who are capable of taking responsibility."

Hoskyns finds that getting assistance of analyst programmers is a problem. "It's not getting the people, it's getting the man with the skills," said the spokesman. "The IBM business has soared and IBM programmers are like gold-dust. They need to have four to five years' experience.

"There is not much use finding ICL analyst programmers although good Digital Equipment or Hewlett-Packard people are more difficult to find than both people," he continued.

The old problem is still there – training fails to keep pace with expansion

Hoskyns' Manchester operation is back on track with demand especially for Hewlett-Packard analyst programmers. "Industry suffered more than elsewhere in the Manchester region, but it is picking up rapidly," he added.

In Scotland, there is a small pool of data processing staff, and those in jobs are unwilling to move. Therefore, unless the company for which they are working moves out of the area, there is little movement.

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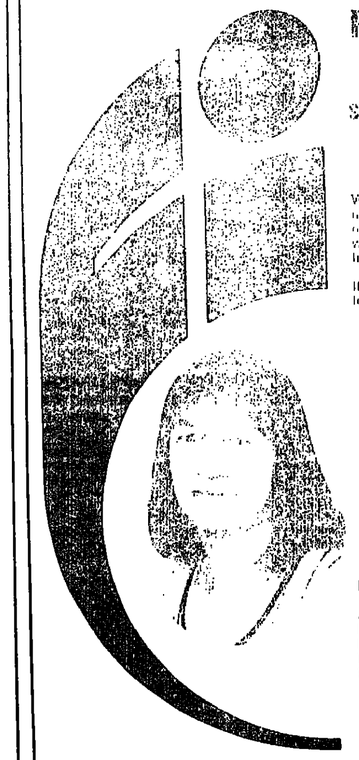

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Requests for all applications in writing to:

Carole J. Parker, Central Personnel Services Group, Science and Engineering Research Council, Polaris House, North Star Avenue, Swindon, Wiltshire SN2 1ET.

Please quote reference ILL 83/25.

The closing date for the return of applications is 24th November, 1983.

(6388)

institut laue langevin
grenoble france

JOBS OVERSEAS

UK personnel are drawn overseas for a number of reasons, as Ron Coates reports:

The flow abroad picks up speed

It is generally understood that British software stands in high regard in the rest of the world. But what isn't so well known in the UK is the growing international reputation of those individuals, the programmers and analysts, who write it.

There has seldom been such a good time for UK computer professionals at all levels to find permanent or contract work overseas. And the specialist recruitment and contract agencies all report a steady flow of people who want to extend experience, both professional and personal, by taking up jobs overseas.

In the US in particular there is an ever increasing demand for British computer staff, largely on a contract basis. And in the traditional markets for UK contract staff, the Common Market and the Middle East, the opportunities are expanding, despite worldwide recession and the threat of war spreading through the Arabian Gulf.

The attractions of overseas jobs to individuals are fairly straightforward. There is the lure of more money, particularly on contract or freelance work. There is the general attraction of getting to see the world and being paid for it, with the potential bonus of picking up a foreign language. And finally it has long been generally felt that experience overseas is a boost to a career in computing.

It looks good on a CV, the technical experience is generally very good and the individual has a chance to pick up a wider insight into international business.

For the overseas buyers of the UK's software expertise, it is somewhat more difficult to specify the attractions. The main one is that British DP staff as individuals have a high standard of technical skill.

This has long been explained by the fact that resources in the average UK installation have traditionally been more restricted than in other countries, particularly the US. This has meant that there is a demand in the UK to get the most out of a system.

It has rarely been the case in British installations that bottlenecks are solved by going out and buying another megabyte of storage. So, particularly at the programming level, a high standard of squeezing that extra bit into and out of the system has become the norm.

But also, according to John O'Sullivan, chairman of agency Trident, British DP staff are more willing to move and make the best of it than are most other nationalities.

He said: "British people are more prepared to travel. They are very willing and able and they quite enjoy it when they're out there. Young programmers and analysts are beginning to look at overseas jobs or contracts as part of their career paths."

The easiest part of the world to go to is, of course, the Common Market. No visas are required and there are reciprocal agreements with the UK for health services in most EEC countries.

At the moment the two bright spots on the Continent are Holland and Belgium. Both countries have a high demand for contract programmers, with an additional boost for operators in Holland due to the fact that employers must keep open the jobs of staff called up for national service.

But there is bad news for anyone hoping to land a year or so in Rome or Paris. Demand for contract staff in France and Italy has been depressed over the past year and work in either country tends to be with the branches of UK companies operating there.

Germany is a special case, as its stringent labour laws controlling contract labour – originally designed to stop some questionable practices in the building trade – almost rules out any contract for more than six months. However, there is still a good number of jobs.

To get down to the major question of how much, it would appear that the going rate for contract work is currently about the same as in the UK, £400-£425 a week, but with expenses, which can be considerable, thrown in on top of this. Of course, special and rare skills can on occasion double this.

In general most of the jobs going in Europe are for people with three to five years' experience and the skills in demand are telecommunications, networking, IBM Assembler and Cobol, with a strong requirement still for CICS experience.

For the really big money, the place to go is still the Middle East. The basic salary range there is

The great bonus is that the money is tax free

£800-£1,000 a week, plus accommodation. And the great bonus is that the money is tax free, although housing, medical cover and periodic free flights back to the UK should not be ignored.

There are, however, drawbacks to Saudi Arabia and the Gulf. The first is that it is much more difficult to get a contract if you are female and, when there, it can be a difficult life for a woman. The Gulf states vary in their treatment of women from an acceptable level of freedom to petty restrictions.

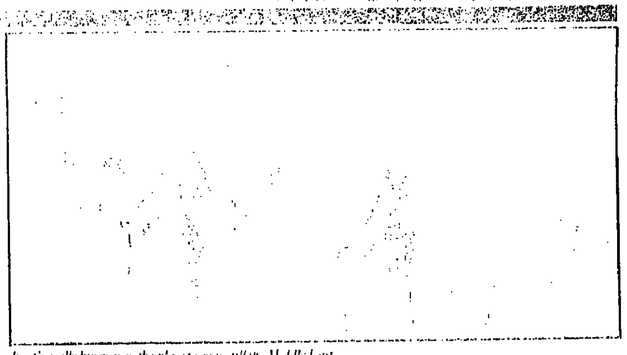
In Saudi Arabia the restrictions are so heavy – for instance, women are not allowed to drive – that it is probably not worth it.

Visas for work can be a difficult problem. Each of the Middle East states has a complex and different series of immigration laws governing the religion, nationality and background of people that it will let in to work.

Most agencies do their best to point out the possible difficulties of work in the Middle East and indeed of any overseas country. It isn't in their interests to have dissatisfied staff and clients three to five thousand miles away.

As with all jobs, it is always worthwhile checking with people who have done them to find out if it is really suitable for you. The majority of people who take overseas contracts and jobs enjoy it and

O'SULLIVAN . . . "British people are more prepared to travel."



For the really big money, the place to go is still the Middle East

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For further information, please contact Jenny Dalrymple-Hay or Ian Murray West on day, 01-493 2947 8am-10pm or weekends respectively Beaconsfield (04946) 4579 Milton Keynes (0908) 563415. Quoting reference 5023.

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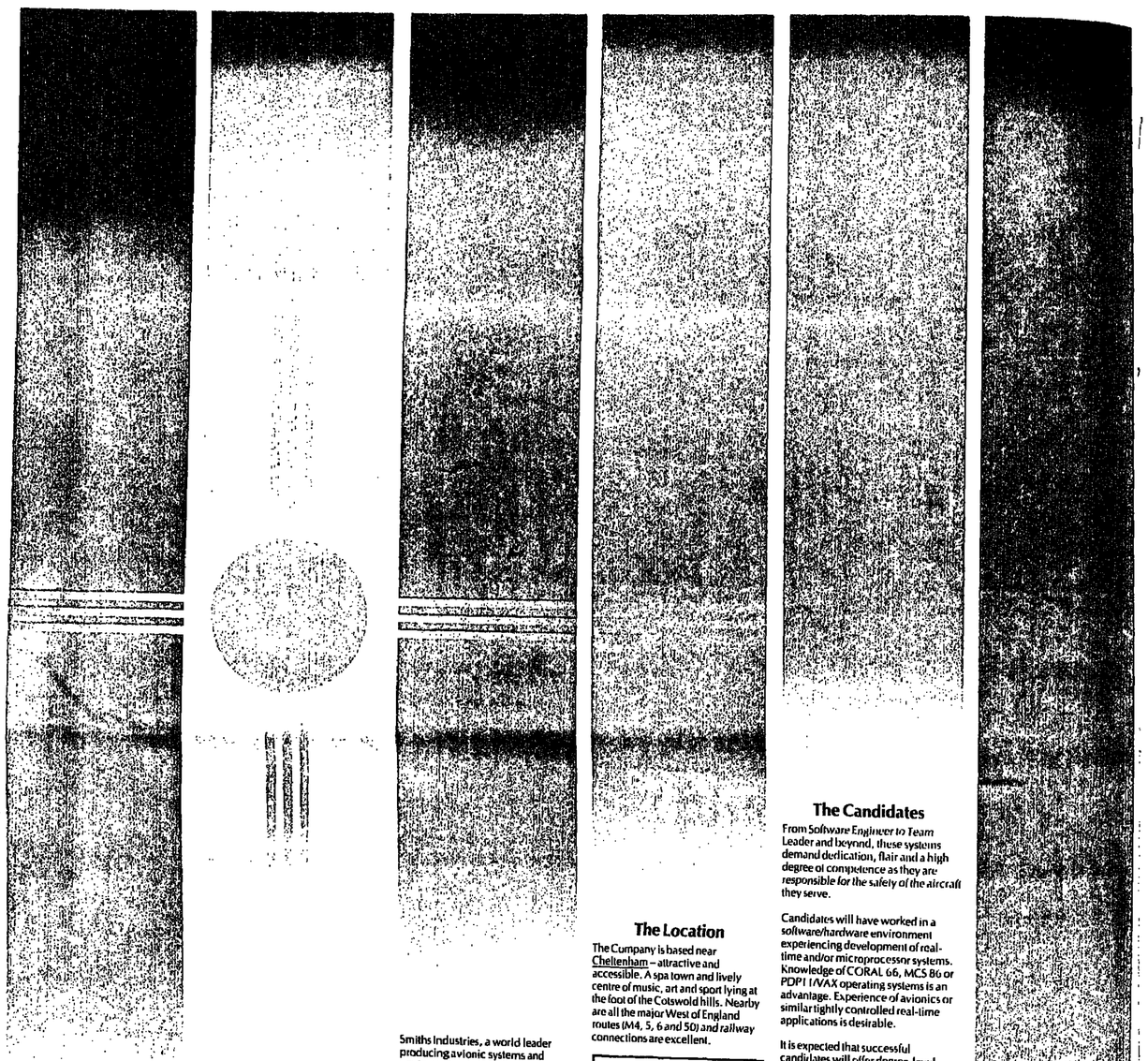

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The Candidates

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It is expected that successful candidates will offer degree-level qualifications and at least 2 years software engineering experience.

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Alternatively send him your c.v. addressed to: Computer People Midlands, Freepost, Alpha Tower, Birmingham B1 1BR.

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For more details or an application form, please write or telephone: **Tony Czapp**, *Resourcing Manager, Plessey Electronic Systems Research Limited, Roke Manor,* Romsey, Hampshire SO5 0ZN. **Tel: Romsey (0794) 515222 or Dial 100 and ask for FREEFONE PLESSEY, ROKE MANOR.**

PLESSEY *electronic systems*

(8393)

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For further information, *please visit us on Stand No. 1151 at* **Compec** in the Main Hall, or write to: **Moira Dale, Lion Systems, Oxford Road, Stokenchurch, Bucks. HP14 3SX.**

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Alternatively write quoting reference or telephone for an application form: **Helen Thompson, Logica VTS Ltd., Drakes Way, Swindon, SN3 3JL. Tel: Swindon (0793) 36291.**

Call in to Stand 613-712 at COMPEC 83 to discuss these and other opportunities EVERYONE WILL BE TALKING TO US ABOUT THE FUTURE.

logica VTS

JOBS IN THE MIDLANDS

Midlands needs trained staff

There just aren't enough experienced analyst programmers in the Midlands. John Riley reports

DEMAND for DP staff, particularly for experienced analyst programmers, is picking up in the Midlands. As companies begin to feel they will survive the recession, they are investing in computers for the first time, or up-dating their existing systems, and this is fueling demand.

However, due to cutbacks in DP staff during the recession, especially by large companies, the pool of trained personnel is too small to feed the demand. These cutbacks have also left their mark on the attitude of staff, who are keeping their heads down and only moving when their security is threatened.

This general scenario, obtained from a wide range of industries, is supported by Knight Programming Support, a recruitment agency, specialising in DP jobs.

"The West and Central Midlands, with its manufacturing and car industries, was one of the first areas to feel the pinch of the recession," says Lorraine Taylor, of Knight's Birmingham office, "but now companies are coming on-stream again, and we are getting more vacancies for analyst-programmers from the big ones compared with a couple of years ago.

"The Greater Midlands, which includes Gloucestershire and Leicestershire were not so badly hit and recruitment has remained more buoyant there.

"There is a high demand for middle of the road people with two to five years' experience," she added. The demand is for a "complete cross section" of staff in terms of language and manufacturers' equipment, although she has noticed that several software houses have diversified the range of manufacturers, and that some ICL sites are being lost to other manufacturers.

"Through the quiet period, a lot of people were staying put, but there are signs that people are starting to move," she said. "Recently, quite a few people have been moving into the area from the south – from London and the Home Counties. Some are moving because of the cost of living and accommodation there, and some because they want to move to more rural areas."

"It is very difficult to get sufficient experienced people in the Midlands but of course we do not reduce our standards."

Beardwood explains that Kalamazoo used to go all over the UK looking for people, but that the company now limits its recruitment effort to the Midlands region now.

"Two to three years ago we used to go as far afield as Glasgow and Southampton to meet prospective recruits. Now we have tightened the net, and although we use the same technique – "Drop in and see us" – we restrict it to the Midlands conurbations."

Staff have been keeping their heads down and only moving when their security is threatened

Taylor adds that although the turnover is getting more widespread, it is not at the level it was before the recession.

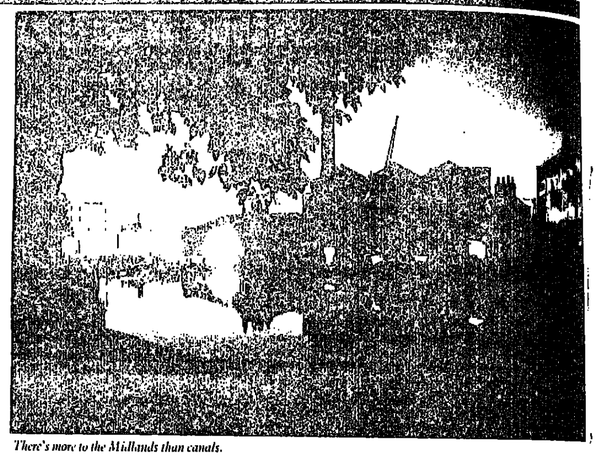
Kalamazoo Computer Services is one of the largest DP employers in Birmingham, and not only trains graduates but also has a commercial training division which trains people for the Manpower Services Commission Tops courses.

Kalamazoo's personnel manager, Colin Beardwood, said that finding skilled people is not easy:

Beardwood has noticed that people are staying put once they have jobs. "People are hanging on. We are also finding this among our own staff. Our turnover has never been high, but our own staff are staying put more. Also, the people we're recruiting are usually people who want to stay in the West Midlands area."

As is the case with most software houses, Kalamazoo gets a large number of unsolicited, speculative enquiries: "These are from all over the UK, but are more likely to be from places north of Birmingham, than south," said Beardwood.

Several Midlands industrial companies were surprisingly cautious about discussing job opportunities within their sector, and were reluctant to be quoted. The general picture that emerged, however, was that experienced programmers were thin on the ground, that recruitment drives were targeted locally to save relocation costs, and that companies are increasingly converting existing employees to computer jobs.



There's more to the Midlands than canals.

One DP manager for a large industrial manufacturer found database and systems analysts easy to find, but had experienced great difficulty in unearthing Cobol programmers. As a result, he recruited and trained people to convert to programming from within his company.

Again, manufacturing industry is finding people with two to five years' experience hard to find. Several companies in that industry are looking closely at ways of economising on programming staff, and are looking particularly closely at applications generators.

"The days of rows and rows of Cobol programmers are over," said one DP manager. "There is no way we can support a massive head count any more, so we are looking at more advanced tools."

Many large manufacturing companies are consolidating their computer operations, and there are good opportunities for database and applications programmers in particular.

Companies in other sectors of industry in the Midlands also use their own resources. For example, a spokesman for the Midlands branch of the Sun Alliance and London Insurance Group reported that the company tends to recruit DP staff from within the organisation, and transfer staff from other branches.

The public sector, too, is experiencing a slowing down in st turnover. Ernest Wilson, DP ma ager of the City of Birmingh Computer Centre, said that a four years ago, when loc authority salaries were out of s with industry, he used to hav 30-40% turnover in staff each ye

In the last 18 months, the C of Birmingham Computer Cent has expanded, and has taken on new people. "Our people are w paid and salaries compare w with those in industry," said W son. "Project leaders are getti £13,000 and analysts aroun £10,000-£11,000."

He added that people have a plied to him for jobs from indust because they believe there is mo job security there than outsid Wilson has, like other sectors Midlands industry, found it diffi cult to recruit experienced peopl "Programmers are like gold-dust he said.

Systems Programmers c£11,000

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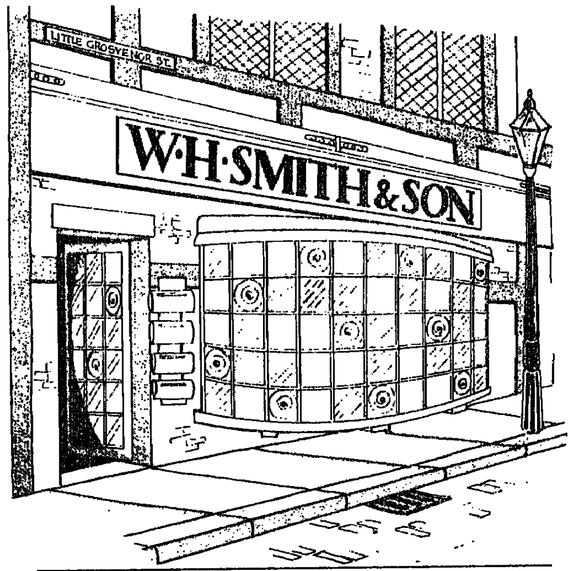

WHSMITH

Sanderson Computer Recruitment Ltd have been retained to provide additional information on opportunities available. For an informal discussion telephone Mike Beesley or Paul Clark on Bristol (0272) 211741 or write giving full career details and supplying a telephone number at which you may be contacted.

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(6480)

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We currently operate a 16 megabyte 3083B and the 12 megabyte 3033N IBM Computer. Installed software includes MVS, TSO, CICS, IMS/DLI, DATAMANAGER, and EASYTRIEVE.

Sound and proven experience as a Systems Analyst with a programming background is required. Some knowledge of IMS/DB and Data Dictionaries would be an advantage.

Application forms obtainable from the Personnel Manager, E.M.E.B., PO Box 4, North PDO, 398, Coppice Road, Arnold, Nottingham NG5 7HX should be returned by 25th November 1983, quoting vacancy no. EM/67/83.

(6423)

WORKELECTRIC

BOX NUMBERS

Box number replies should be addressed to:

Box Number .....

c/o Computer Weekly
Quadrant House, The Quadrant
Sutton, Surrey SM2 5AS

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(Arts, science and engineering graduates)

Applications are invited for three posts in SYSTEMS PROGRAMMING in the University's Computer Centre. The Centre is equipped with Honeywell Multics and multi-Prime systems with network links to a range of specialist computers elsewhere. There is also considerable involvement in local networks and microcomputers.

Candidates should be graduates preferably with some relevant experience. One post will be specifically for COMPUTER AIDED ENGINEERING and graphics software; candidates with some engineering background would be preferred. The other posts are more general, one possibly suitable for an arts graduate who would ultimately undertake an DOCUMENTATION and INFORMATION aspects of computing. In all cases suitable training and support would be provided.

The appointments will be made for three years in the first instance within the lower half of the scale £5,310-£11,815. Application forms and further particulars from Paul Johnson, Establishment Officer, ref. 83/32/CC.

Loughborough Leicestershire

(6481)

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Salary £6264-£7896 per annum

Required to develop, operate and maintain equipment and software for three microprocessor laboratories. Knowledge of machine code, assembly and high level languages for 8bit and 16 bit microprocessors appropriate. Experience in design, construction, testing, maintenance and repair of microprocessor systems for engineering and control systems applications desirable.

Degree, HND/HNC or TEC HC/HD with computer engineering options suitable but others considered.

Application forms and further details from the Personnel Officer, Leicester Polytechnic, P.O. Box 143, Leicester LE1 9BH Tel (0533) 551551 ext 2303.

Closing date 17th October 1983.

(6481)

DALGETY

HONEYWELL DPS 6

Our client, a major multinational manufacturing and distribution company, use Honeywell equipment at all their Continental locations. The UK company are about to install a DPS 6 under GCOS MOD400. COBOL will be the main programming language.

The successful applicant will be totally responsible for all systems implementation and should:

- ★ Be fluent in COBOL and GCOS 400
- ★ Be capable of selecting and evaluating DPS 6 software packages and products.
- ★ Be capable of installing, customising and interfacing selected packages and products.
- ★ Have a solid commercial background particularly in the sales accounting and order processing fields.

This position offers an ideal opportunity to grow with an expanding company; some European travel is envisaged to co-ordinate and interface development of the TP facilities.

For further information please contact Jenny Dalrymple-Hay or Peter Henrick on, day 01-493 2947 8am-10pm or weekends respectively, Beaconsfield (04946) 4579, 01-390 1540 quoting reference 5024.

(6412)

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Abbey Life has a vacancy for a Computer Operator with a minimum of 1 years experience of MVS/JES2 (VS1 would be considered). Knowledge of JCL and utilities would be an advantage but not essential. 5 'O' levels (including English and Maths) are also required.

The Company operates a 5 day, three shift system, currently under MVS/SP on IBM 4341 and 3083 CPUS with ACF/VTAM, CICS/VS and ROSCOE.

Please write or telephone for an application form to:

Val Hastrop or Alison Davies,
S. & D.P. Technical Recruitment,
Abbey Life Assurance Company Ltd.,
80 Holdenhurst Road,
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Tel: (0202) 292373 ext. 4444.

Abbey Life

(6103)

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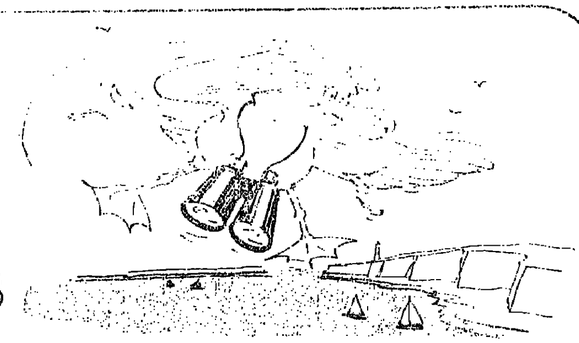

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Our client's name is known throughout the world. They manufacture, distribute and retail a comprehensive range of products for the industrial and domestic marketplace. At their South Coast Computing Centre, ongoing systems growth is now at a stimulating stage. On-line Sales Order Processing, COPICS, and Distributed Systems are but three of their more important developments.

The Centre currently utilises Rediffusion minis and micros, which are linked to an IBM 3083 under DOS/VSE, with CICS, DLI, COBOL, UFO, EASYTRIEVE and DATAMANAGER as software.

These developments are at such a progressive stage, that our Client requires additional ambitious d.p. practitioners to contribute to growth. Therefore, forward thinking analysis and programming professionals with a sound fluency in COBOL in an IBM environment, are invited to apply. Additionally, experience of CICS, DLI and/or Rediffusion mini software would be ideal, as would exposure to design in manufacturing and commercial applications systems.

Vacancies exist at various levels along the salary range, and the posts carry attractive benefits, including an excellent relocation package.

If you are looking for a further move up the career ladder, and wish to join a market leader in the forefront of systems development, then contact **JOHN WHELAN** on **061-833 0427** (24 Hour Answering Service) or 0625 520708 (Evenings and Weekends before 9 p.m.).

(5424)

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(6363)

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(Central Stockton)

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The Registrar's office is recently formed to administer national PLR for authors using a PERKIN ELMER minicomputer with On-line and batch processing. Salary range £6,600-8,000 with Civil Service conditions including non-contributory pension.
An operator with minicomputer experience and programming ability is needed to take responsibilities for the day-to-day operation of the computer and data security procedures. We are looking for some experience in COBOL programming. Familiarity with PERKIN-ELMER DMS Reliance would be an advantage. Occasional evening/weekend overtime.

Application forms from the Administration Manager, Public Lending Rate Office, Bayheath House, Prince Regent Street, Stockton-on-Tees, Cleveland TS18 1DS.

(6303)

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(6347)

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We are seeking an experienced analyst/programmer who is looking for a wider role in a compact, dynamic computer department.

The main function will be the development and implementation of new applications using CUPID, a 4th generation language, together with some work in Basic Plus.

The company is moving to a Systime VAX computer from a PDP11/44 serving a network of local and remote users. Experience with VMS will be a distinct advantage.

This is a new position and it will appeal to someone with about 5 years experience in computing.

The position carries an attractive salary and excellent working conditions.

Applications in writing with C.V. to Peter Meier, Personnel Manager, Anglia Television Ltd., Anglia House, Norwich NR1 3JG, quoting reference 825/G, to arrive not later than 18th November, 1983.

ANGLIA TELEVISION

(6301)

Systems Programmers

Thames Valley

£12-14,000

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Capp House, 96d South End, Croydon CR9 3SD.
International & UK Recruitment Consultants

Our client is looking for two technically competent Systems Programmers who want to develop their skills in a mainstream IBM software environment.

The company has an IBM 4341/2 processor running under VM and OS/VS1, with CICS, DL/1, APL, ROSCOE & UFO. Early next year it will implement MVS in readiness for a processor upgrade and network support under SNA.

You should have at least 4 years' IBM DP experience and 18 months minimum as a Systems Programmer with in-depth knowledge of VM or VS1 or CICS. Experience of MVS would be an advantage for one post.

A competitive salary will be offered, based on experience, as well as ample training and a good benefits package expected of a large company. For further information, please write or telephone (24 hour answer service) quoting ref: CW103-3D. Applications are invited from either sex.

EMPLOYMENT

Job prospects pick up – but 13% of DP workforce is still on dole

The latest statistics look promising for employment, says John Aczel

OVERALL employment in the British computer industry has shown a much better trend since the beginning of 1983, following the shake out in staffing over the past few years. There has been a marked rise in the number of job vacancies in this sector, particularly for specialists in programming and systems analysis, and the employment prospects are forecast as promising for the next 12 months.

Up-to-date statistics about the level of employment are not easily available, and the official figures contain many gaps in this field. For one thing, unemployment figures are no longer available, as a result of the cutbacks in the collection of official data. No meaningful breakdowns are given by types of employees in the hardware sector and other related areas.

Nevertheless, the underlying trends can be analysed by looking at the overall situation affecting the computer hardware sector, as well as the latest figures for employees in the service sector. In the case of hardware firms, there were many cut-backs in employment during 1982, and, by the end of last year, employment fell significantly compared with the previous 12 months.

Due to changes in classification and other problems, it is not easy to monitor the longer term trends over the past five years, but it is believed that 1981 and 1982 represented the bottom of the employment cycle, with a marked reduction in staffing levels for a wide range of computer hardware manufacturers. Nevertheless, conditions by the beginning of 1983 had started to stabilise, and, by June 1983 the number employed in the hardware field was estimated at 58,100 people.

This total was increasing slowly, compared with the beginning of the current year, though it was marginally down when measured against the figure for the same period in 1982. Evidently, one should not read too much into these figures because of the statistical fluctuations which occur, particularly on a monthly basis.

Nevertheless, the heavy falls which had been experienced during the period between 1979 and 1982 have now been arrested and overall employment conditions have become steadier.

It should be stressed, however, that there has not yet been a major pickup in demand for employment in this field, despite the fact that production and sales of computers have been rising rapidly since the beginning of the year.

According to the official figures, output in the hardware sector rose by 27 per cent in the first quarter of 1983, as against the same period in 1982, and this represented a considerable speeding up of activity compared with the overall trend for 1982.

Despite this growth, however, most hardware companies have been reluctant to increase their staffing requirements and have placed major emphasis on increasing efficiency. Competition in the hardware sector has been fierce and companies have been concentrating on increasing turnover while keeping the same level of employees and, in some cases, even reducing them. Thus, there has been a significant rise in turnover per employee during 1983 and this trend is likely to continue for some time.

NUMBER EMPLOYED IN HARDWARE INDUSTRY

	No (000)
1st quarter 1981	59.1
2nd quarter 1981	59.3
3rd quarter 1981	61.1
4th quarter 1981	58.9
1st quarter 1982	59.1
2nd quarter 1982	59.2
3rd quarter 1982	58.9
4th quarter 1982	58.3
1st quarter 1983	58.2
2nd quarter 1983	58.1

The official statistics give some idea of the breakdown of employment by sex. Though females represent only a relatively small proportion of the total, their numbers have been increasing faster than their male counterparts' numbers since the beginning of 1983. The number of female employees went up by 5% between January and June, whereas for male staff the number was steady at the lower level.

As mentioned earlier, information about the percentage of unemployed in the computer sector is not being collected any more by the Department of Employment, but it can be estimated roughly by various means. It is reckoned that about 12–13% of the total computer workforce is on the dole at present, though this percentage varies greatly according to the grades and skills of staff.

The proportion among unskilled personnel, particularly among operators and data entry staff, is higher than average, while for skilled programmers it is believed to be considerably lower.

Unfortunately, up-to-date statistics in the computer services sector are not available and considerable delays have now occurred in the release of information by the government's Business Statistics Office. Its latest figures refer only to the end of 1982 and it is believed that they contain many inaccuracies, due to the limited sample size.

Fortunately, there are other sources which can be consulted, particularly the recent survey carried out by the Computing Services Association. According to the investigation by the CSA, which was carried out in July 1983, the total number employed went up by 7.6% on an annual basis to over 29,000. This was measured by companies which are members of the association.

EMPLOYMENT IN HARDWARE SECTOR DURING 1983 (000)

	Male	Female	Total
January	43.4	14.4	57.8
February	43.0	14.5	57.5
March	43.4	14.8	58.2
April	44.1	14.8	58.9
May	43.4	14.1	57.5
June	43.0	15.1	58.1

These changes have been achieved at the expense of less skilled staff and of data control and preparation employees. Their importance has been diminishing, particularly as computer bureaux have been facing a declining trend for their billings in recent years.

Part-time employment in the computer services sector has been gaining in significance, though it is believed to have remained comparing during this period. According to the CSA, the revenue per employee has averaged £27,600 by the end of July 1983 – considerably higher than that recorded in the previous year.

The official statistics published by the British government on computer services employment reveal some interesting trends, even though the data are somewhat dated. The proportion employed as consultants and senior programmers and analysts has been going up markedly. These two categories now account for over 45% of the total for full-time employment.

This compares with 43.6 per cent at the end of 1981, and it is believed that this percentage will continue to rise during the coming 12 months.

GROWTH RATE IN PERSONNEL FOR 1982 IN EUROPEAN COMPUTER SERVICES COMPANIES
(exceeding those involved in a merger or acquisition)

	UK	France	W Ger	Nether'l's
Operators and data entry	−6.3	−8.0	−2.4	−5.6
Consultants and programmers	9.2	4.6	6.2	8.3
Sales and marketing	11.3	6.8	4.0	5.8
Others	6.3	9.4	3.1	7.0

Possibly, this growth was too high because of the change in the nature of the sample, as well as the fact that some smaller companies outside the CSA did not take part in the investigation. Nevertheless, it is quite clear that staffing levels among computer services companies have been rising, particularly since the end of last year.

Another source is *The Seventh Annual Survey of the Computing Services Industry in Europe 1983* published by the European Computing Services Association. According to this survey, the growth in employment in the UK for computer services firms rose by nearly 6%, though it varied considerably according to the type of personnel.

There has been a further fall in employment among operators and data entry staff, while both sales and marketing personnel have increased by an above average rate. Consultants and programmers saw a big rise in 1982, averageing over 9%.

These figures should be treated with some caution, due to the relatively small sample, but it appears that the UK has been showing one of the fastest growth rates in employment, compared with its European competitors. In terms of staff, UK firms have out-paced France, West Germany and the Netherlands during 1982.

Taking Europe as a whole, the average growth in employment for computer services companies was around 3% while the rise in consultants and programmers averaged 7.6% and for sales and marketing personel 5.2%.

Efficiency among British computer services companies has also been going up, despite the fact that numbers employed have been relatively steady in recent months. Most firms have been concentrating on building up their full-time staff and the latest figures confirm this trend.

By the end of 1982, the number of part-time staff was around 1,000, and this was about the same as at the end of the previous year. There has been some change in the type of occupation for part-time people, with growing numbers of part-time programmers and analysts being recruited.

At present it is believed that this trend has gathered momentum and that some firms will rely on part-time people, especially of a specialist character, if they cannot fill their requirements with full-time personnel.

The latest survey conducted by the CSA emphasises that many firms are now complaining about the problems of recruiting specialist staff of various kinds. It points out that "in the last annual survey, the economic recession had been identified as the predominant factor adversely affecting future business prospects.

"This factor has now fallen to second place and been displaced by the absence of good, skilled and experienced staff. Lack of good sales and marketing staff comes in for particular mention."

It is believed that the situation has become even more critical in recent months and many firms who want to expand are now finding that the shortage of specialist people is inhibiting their growth.

The prospects for employment are now much brighter than they have been for some time, but there are various bullish factors affecting the number of vacancies and staff requirements likely to occur over the next 12 months.

One important factor is that the growth in demand for most hardware and computer services will remain at a high level and will continue to grow at a rapid rate.

It is expected that demand for computer hardware will be buoyant and could increase by at least 25% in value terms during the next 12 months. For some products, particularly for microcomputers, the rise will be even more significant and some commentators are forecasting a growth of at least 50% for this market.

A similar trend is also estimated for computer services and this sector could grow by around 20% in billings. Dr Doug Eyeions, the director general of the Computing Services Association, is bullish about the prospects for his industry and says that the buoyancy being shown at the moment is likely to be well maintained for some time, especially for software products and turnkey projects.

Some commentators question the overall prospects for the UK economy and undoubtedly there are many imponderables which could affect its growth and have some impact on computer sales. On present trends, however, gross domestic product will remain fairly steady and should show a rise of around 2% during 1983 and the early part of 1984.

If these predictions do materialise, it is estimated that employment prospects will continue to improve.

For hardware companies, however, the increase in employment will be fairly limited, at least for the time being. There is still considerable scope for rationalisation among hardware companies and many firms will be reluctant to increase staffing requirements until this process is completed.

The growth in the computer services sector, however, will be much faster. According to Eyeions, a growth in employment of around 8% could be seen in this field, with some of the biggest increases occurring among software specialists and high level consultants of various kinds.

"The Seventh Annual Survey of the Computing Services Industry, published by the European Computing Services Association, can be obtained from the CSA, Hanover House, 73/4 High Holborn, London WC1, price £120 to non-members, £80 to members.

TREND IN FULL-TIME EMPLOYMENT FOR STAFF IN COMPUTER SERVICES

	1982 No	% of total employment 1982	1981
Consultants	3,022	12.3	11.6
Programmers/analysts	8,157	33.1	32.0
Computer operators	2,851	11.6	12.4
Data control staff	929	3.8	3.9
Data preparation staff	1,711	6.9	8.1
Administrative staff	3,117	12.6	13.0
Marketing executives	2,040	8.3	8.5
Others	2,836	11.4	9.9

SOFTWARE PROJECT LEADER

The person our client is looking for is probably quite happy at present as a senior member of a busy team.

We know we have a job on our hands, that people like you are extremely hard to find and are relatively expensive to employ. We also know that your present employer may bend over backwards to keep you should you decide to leave.

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- New VAX 11/780 for software development, running under VMS 3, plus the usual micro development systems
- Top flight professional colleagues
- Systems which include 8086, TMS 9900 and 1802 in a broad range of civil and military applications
- Languages including CORAL, PLM and Assembler.

You'll be involved in embedded systems connected with the expanding technology related to Air Traffic Control and in order to cope with the exacting standards required we think you are likely to be of degree standard with three to five years relevant experience. Whatever age you are, this could well be your first management role, one where you will be involved with customers at every stage from initial contact to acceptance of equipment, where you could run several projects simultaneously and where you can contribute your positive views and considered opinions.

We quote no salary simply because the exact figure depends on you and your ability to demonstrate your expertise. Our client offers a comprehensive list of benefits which includes very generous assistance with relocation.

Find out more. Either send full details to me at the address below or phone me at home this Sunday on 0992 442505 between 10 and 5 (reverse charges as necessary). I look forward to explaining why you'll be even happier in your next job.

Andrew Millhouse, Ref: 246, Deansgate Management Services, 52 Bedford Row, London WC1R 4LX. Tel: 01-405 1260 or 01-405 1220

DEANSGATE MANAGEMENT SERVICES

PHONE IN

HP3000 ANALYST PROGRAMMER

Foster Wheeler Energy Limited, one of the world's largest petrochemical contractors, is looking for an Analyst/Programmer to provide technical advice and support for the development and marketing of their highly successful personnel computer system. This is an unusual job, with greater breadth and responsibility than is normal at this level — the key requirement being a creative and imaginative approach to development work.

In-depth experience of the HP3000 is essential, as is problem-solving ability. The main language is FORTRAN. Knowledge of SPL and IMAGE, and familiarity with the pro's and con's of application generators would be an advantage. The job involves a wide range of activities from technical investigations and evaluations, through discussions of problems with clients, to systematic planning and scheduling, analysis and programming.

Suitable candidates are likely to be aged 25 to 35, self-motivating, with the ability to work well in a closely knit team of mainly non-DP people.

We offer an attractive salary, flexible working hours and free membership of our sports and social club.

Please write to Rosemary Manning, Personnel Department, Foster Wheeler Energy Ltd., FREEPOST, Reading RG1 1BR, or telephone Reading (0734) 585211.

Foster Wheeler Energy Limited

ANALYST DEC/FINANCIAL — **to £13,000**

A well known City financial concern requires an Analyst to be involved in the development, implementation and marketing of their on-line real-time systems. They seek a young Analyst with around two years' financial applications exposure, accounting systems being of special interest to our client. This position affords the opportunity to be involved at an early stage of the development and make a heavy impact on this and future projects.

ALL LEVELS ICL COBOL — **to £14,000**

A growing Essex based company, heavily committed to major developments of financial systems on ICL 2900/VME systems, is seeking experienced ICL people at all levels. Progs. and Analyst/Progs. should have 18 months or more COBOL experience, the latter with some formal analysis. Analysts and above will have at least two years' systems exposure. These positions attract a generous company benefits package including an excellent profit share scheme.

ANALYST/PROGS DEC/BASIC — **£NEG**

Our client, an expanding software house based in Surrey has requirements for Analyst/Programmers for development and implementation of commercial systems in a VAX and PDP environment. They seek self motivated and enthusiastic people with at least two years' BASIC gained on DEC equipment. They offer a rewarding career with excellent opportunities for advancement within a client oriented situation.

ANALYST/PROGS HP COBOL/BASIC — **to £10,500**

Rapidly expanding software house based in C. London seek Analyst/Programmers to join their teams. A minimum of 12 months COBOL or BASIC gained in an HP 3000 or HP 250 environment is required. This is a good opportunity to work on a variety of projects and offers successful candidates very good career prospects and perks which include a company car in the future.

ANALYSTS C. LONDON — **to £13,500**

We have been retained by two well known London based companies to recruit Analysts with varying levels of experience. A sound DP background is required with preference given to candidates with general accounting applications exposure or IBM systems experience. Both positions involve extensive working on new projects and offer good career prospects. Perks include large company benefits and discount on company products.

PROGRAMMERS COBOL/FINANCE — **c £10,000**

Two C. London based financial concerns require ambitious Programmers to join their teams. Applicants should have a minimum of 18 months COBOL gained in a commercial environment and should have the potential to move rapidly into a junior management position. Excellent perks include full banking benefits, annual bonus and some overseas travel.

ANALYST/PROG RPGII — **£11,500**

An Analyst/Prog. with at least two years' RPGII (in a SYS 34 environment) is required for a manufacturing site based in Berks. User skills are of the utmost importance since a great deal of time will be spent with first time users off site. Although based in Berks. the successful candidate must be prepared for some UK and overseas travel. Standard large company benefits apply to include an excellent relocation package.

PROGRAMMERS HONEYWELL L6 — **to £11,500**

We currently have requirements for Programmers at two C. London Honeywell installations. Candidates should have 18 months'+COBOL or SCREENWRITE gained on Honeywell hardware. Both clients are currently expanding their DP teams to work on a variety of new developments. Excellent career prospects are offered together with a wide range of benefits which include travel allowance, sports and social club and a subsidised mortgage after qualifying period.

PROGRAMMER RPGII — **£7,000**

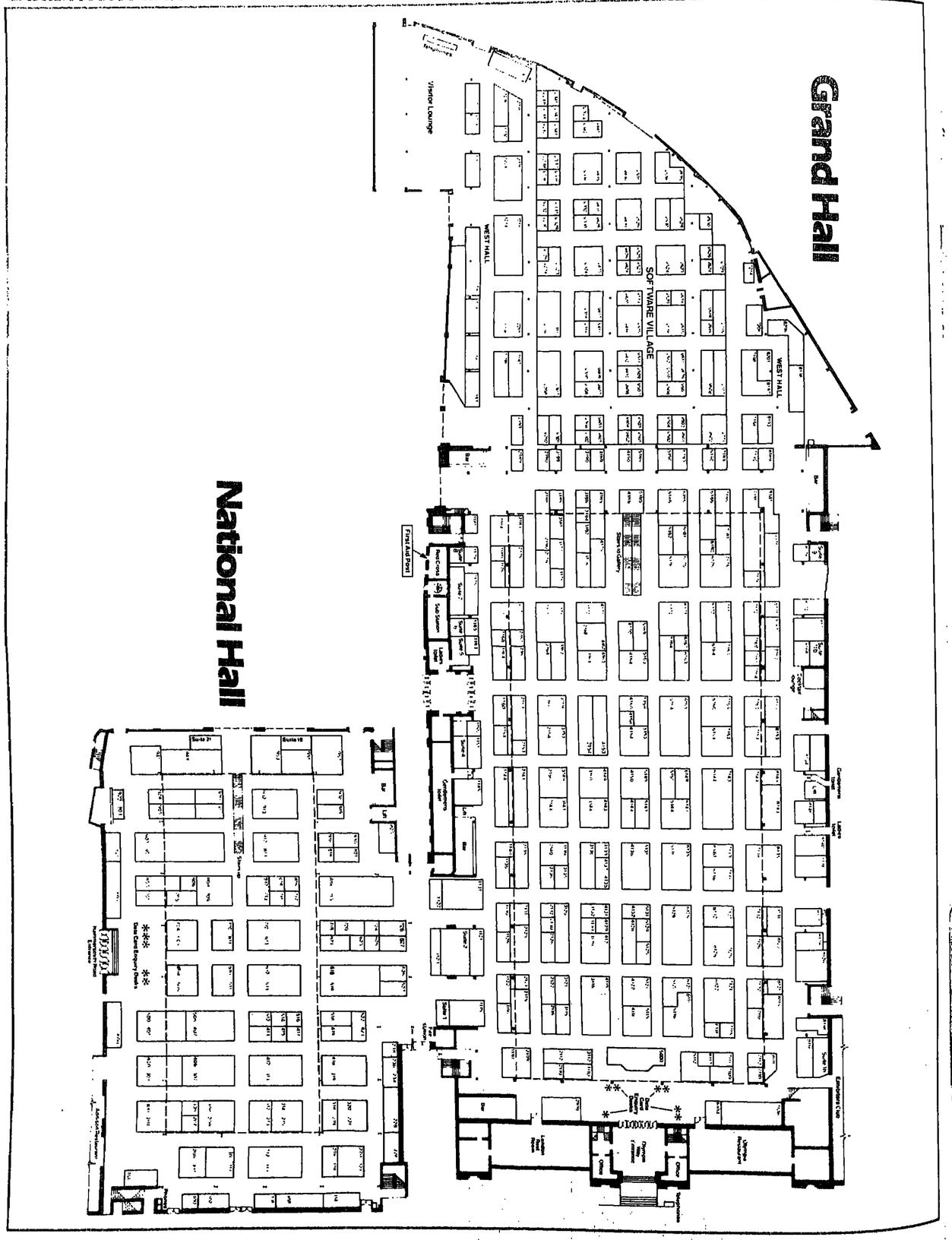
London based site require a Programmer with one year's commercial RPGII. The hardware is WANG but any hardware will be considered. Applicants should have standard accounting knowledge i.e. General Ledger, Purchase Ledger etc. and any manufacturing systems exposure would be of special interest. This site will offer the successful candidate rapid progression into analysis.

(6178)

404 4821

Apex Computer Recruitment Ltd.

London Office: 59 Grays Inn Road, London WC1X 8TL. Tel: 01-404 4821.
Brussels Office: Rue Gaili de Gamond, 24. Uccle 1180 Brussels. Tel: 010 322 377 4193.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BRITAIN'S PROFESSIONAL COMPUTER SHOW

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This month, it's Compec 83, Britain's biggest ever professional computer exhibition.

From November 15 to 18.

For four days at Olympia, London, over 500 companies are showing the systems, services, software and supplies that are key to the future success of your operation.

Every computer professional and serious user needs to know what's on show at Compec.

There's no other exhibition with the sheer quality, scope and size of Compec. There's no other show with so many leading names: IBM, ICL, Digital Equipment Co. Ltd., Acorn Computers, Sinclair Computers, Hewlett-Packard, Newbury Data, Norsk Data – and hundreds more.

Compec covers mainframes to micros, modems to matrix printers, media to minis, and much more.

And it's all under one roof, expressly to help you see and select what's your next step in computing.

Get to know what's going on in the industry.

Spend a day this month at Compec. Admission is just £3.00, with tickets available at the main entrance.

There's no doubt, whatever your interest, whatever your need, it's at Compec 83.

Official Hotel Reservations Service: Telephone Sastel International on 01-828 1137.

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COMPEC, OLYMPIA, LONDON, NOVEMBER 15-18 1983.
A ComputerWeekly EXHIBITION

Are you a senior sales executive seeking an attractive and rewarding position in sales management?
Our client is a dynamic young company wishing to appoint a London based Sales Manager. Your expertise must include a successful track record in mini-computer sales to major accounts.
Ref F184

Our client is a major British manufacturer marketing telex message switching and network management systems.
Their 1984 plans include the recruitment of Sales Executives with in-depth experience of communications systems sales, to either small business or major account customers.
Ref F195

A major computer manufacturer currently expanding their sales operation throughout the UK require experienced business systems sales people, with a good understanding of the mainframe and large minicomputer market place.
You must be able to demonstrate a proven capability to handle major accounts and generate new business.
Ref F188

We have many opportunities available to successful sales executives at all levels of hardware, software or business systems sales.
All sales personnel with above target performance for this year should contact us to arrange a meeting to discuss your own prospects for 1984.
Ref MM1

For more information and an immediate interview contact FRED BRAMLEY on Farnborough 516141 during office hours, or Reading 345588 evenings and weekends.

A major financial institution has engaged our services to select a professional for this senior appointment. You should be able to prove your effective man-management expertise together with a comprehensive background in IBM DOS Systems Programming.
Reporting directly to the MSM you will have responsibility for the systems and operations section and should have the ability to motivate them into effective and efficient teams.
Ref J190

One of our most respected clients, a leading insurance company offer a unique career opportunity for a programming team leader to gain management experience whilst retaining the essential technical role necessary to maintain standards, procedures and quality control of design and programming.
Ideally you should have proven expertise in IBM COBOL in a DOS environment with CICS and DL1.
Ref J115

Our client, an international organisation currently expanding their development in various European sites, offer interesting career opportunities to COBOL Programmers or A/Ps with ADF experience. European travel will be involved and the necessary retraining will be given to those meeting the desired standards.
Ref J191

We have been commissioned to assist our client, currently developing their on-line database system, in supplementing their programming team. They offer an excellent opportunity for IBM COBOL Programmers to gain database experience.
Ref J116

Contact PETER JEZEPH on Farnborough 516141 during office hours or at home on Guildford 34718.

TRIDENT COMPUTER SERVICES GROUP PLC
TRIDENT HOUSE,
38/44 VICTORIA ROAD, FARNBOROUGH,
HANTS, GU14 7UD.
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COMPUVAC

DEC PDP & VAX (COMMERCIAL)

ANALYST PROGRAMMER BERKS. £9,000-£12,000+
If you like lots of user contact and enjoy problem-solving, an international organisation, transferring to VAX, wants your BASIC and DEC experience for a position where you will be involved in various small and large projects and no two days are the same. Excellent career path and perks.
JH/CW

8600 GOOD RSTS/E? LONDON £9,500 + FREE HOLIDAYS
Are you presently involved in a monotonous maintenance routine but know BASIC+ and RSTS/E inside out? Do you want to work on VAX, be involved in development and have free holidays? If you have the personality for user contact and are looking for a challenging and busy environment, my client needs you for position where initiative is rewarded with excellent career prospects and free holidays, etc. JH/CW

MUMPS OR MIIC SURREY/MIDDX BORDERS c.£9,000
Renown company has a requirement for a MIIC or MUMPS Programmer to work with VAX, other MINIS and MICROS in an on-line environment. You'll be involved in the development of commercial systems in an installation offering good benefits including relocation.
JH/CW

ICL

ICL DME/VME ANALYST/PROGS TO c.£11,000 + PERKS
Two positions vacant in South London site currently running under CME. Requirements are four years+ ICL background, ideally with a knowledge of VME and on-line systems with tangible evidence of Analysis from design stage.
MN/CW

ICL ME29 ANALYST/PROGRAMMERS TO c.£11,000 + PERKS
Two London installations require experienced ME or 2904 staff with knowledge of on-line systems using either TPS or TPMS. Some exposure to Analysis work is essential – supervisory experience required for one position.
MN/CW

ICL VME/B CONSULTANTS TO £18,000
Major software house requires excellent VME/B skills with IDMS/TP experience. Applicants must have tangible Analysis and current COBOL programming skills. Salaries excellent – locations either Central or West London.
MN/CW

IBM

IBM SYSTEMS ANALYSTS TO £16,000 + BENEFITS
A number of our clients in the centre of London are looking for experienced IBM DOS/MVS Systems Analysts. Applicants should have proven experience of designing on-line systems, preferably in a banking/financial environment. A previous financial programming background using COBOL would be highly desirable.
RC/CW

IMS SYSTEMS PROGRAMMERS TO £17,000
Candidates will have at least three years' Systems Programming experience on either DOS or MVS systems, at least one of which will have been working in an IMS systems environment. You will be responsible for handling all queries relative to the Database Technical Support Group and therefore, must have seen a major project from feasibility through to implementation.
RC/CW

IBM SYSTEMS 34 and 38 £9,000-£12,000 + BENEFITS
If you are an ambitious Programmer or Analyst Programmer with 18 months' to three years' System 34 or 38 experience using RPGII or RPGIII in a financial environment, you will be of interest to a couple of our major clients in the centre of London. Both companies offer further training, where necessary and a complete benefits package.
MB/CW

TRAIN IN CICS & DL1 or IMS DB/DC TO £10,000
A number of our clients based in London and the Home Counties are actively looking for Programmers and Analyst Programmers, with between 18 months' and four years' experience on IBM Systems wishing to learn on-line and database techniques. If you have a good applications background we would like to hear from you now.
MB/CW

OTHERS

MINI & MICRO PROGRAMMERS & £7,000-£12,000
ANALYST/PROGRAMMERS ALL AREAS
We are currently seeking to recruit Programmers and Analyst/Programmers with at least one year's experience of any mini or micro kit using COBOL, FORTRAN or BASIC, for a large variety of clients in all areas. Environments include manufacturing, commercial, financial and software houses. Salaries dependent upon experience.
SB/CW

BURROUGHS PROFESSIONALS S. E. ENGLAND
We are being retained by several clients to recruit Burroughs professionals at all levels for vacancies in London and Home Counties. Positions available range from Programmer (two years+ experience) to Senior Systems Analyst and Project leaders. Preference given to applicants with Burroughs Link experience. Environments are mainly commercial and software houses. Salaries negotiable by experience
SB/CW

TECHNICAL

SCIENTIFIC, TECHNICAL & COMMUNICATIONS DIVISION
I need top-class Computer Professionals to contact me now by sending me their very detailed c.v.'s. Some of you will be available now, some of you will be available at a later date. Software Engineers, Systems Engineers, Hardware, Network and Telecoms Engineers, Analysts, Programmers – you will have a good degree related to your profession and at least two years' solid job experience in the computerised industry.
PZ/CW

CITY £8,000-£10,000 - BUPA
My client requires two Programmers with two years' MACRO-11 and 6502 ASSEMBLER. Equipment on DEC PDPs and runs under RSX11M. A block structured language is also necessary. C, PASCAL or ALGOL. FORTRAN is a plus.
PZ/CW

HANTS £9,000-£9,500
A rather rural position. A Systems Programmer is required who is fluent in FORTRAN, ASSEMBLER to support PRIMOS systems. They might train an applications programmer who has been involved technically in PRIMOS systems.
PZ/CW

PDP11 and LSI ENGINEERS SALARY OPEN
My client requires six first-class DEC Mainframe and LSI mini Field Service Engineers to work both in-house and service customers. Mini experience may be on Datapoint or Hewlett-Packard. You will be very experienced and you may negotiate your salary which is entirely open. The company has locations in London and the South. You will receive a company car.
PZ/CW

CONTRACT

BURROUGHS CMS COBOL - SIX MONTHS
We have a number of contract requirements in London/South East for Programmers and Analyst Programmers to work on the development of various commercial systems.
SF/CW

IMS B100 DPPX - PROGS AND DESIGNERS: An Opportunity to Train
Ideally these London-based contracts call for a number of experienced DPPX Programmers and established/aspiring Designers to start NOW/DEC/JAN. In addition, our client will train contractors with suitable CICS backgrounds willing to learn a new machine environment
SF/CW

CPS RECRUITMENT CONSULTANTS

TELEPHONE
253 5042
10 LINES (24 HOURS)
OR 250 0456

COMPUVAC HOUSE
121-125 City Road, London, E.C.1
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(CMS)

TRAINING

Pass on that skill — it's rewarding for the extrovert

John Charlton looks at the prospects for those who might be tempted by a career in training DP recruits

ONCE upon a time, as long ago as the 1970s, there were plenty of vacancies in the private sector for anyone who could teach Cobol. But in the harsher climes of the 1980s the call is largely for those who have much more substantial skills.

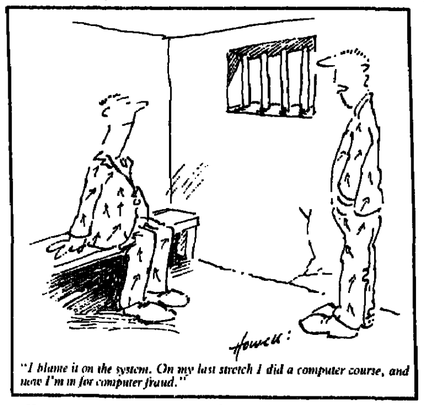
BIS (Business Information Services) is based in London, and runs over 300 courses a year, covering a wide range of data processing subjects. For many of these courses BIS uses specialist consultants, but it is always glad to hear from highly skilled and experienced people to join its own team of lecturers.

Michael Hunt, BIS' personnel manager, told *Computer Weekly*: "We are very interested in hearing from people with experience in real time systems design, database design, and distributed processing."

Vacancies at BIS depend on the expansion of courses – and the number of lecturers who might resign at a given time.

Hunt says: "Normally the resignation process creates four to six vacancies a year."

BIS is looking to fill three vacancies before Christmas with staff who have substantial experience in the above areas. Salaries depend on experience.



"I blame it on the system. On my last stretch I did a computer course, and now I'm in for computer fraud."

Hunt says: "We pay the market rate for the job. For example, a teacher of systems design can expect to earn about £12,000 a year, but it all depends on experience. For instance, the 30-year-old with four to five years' good experience in systems design could get £14-15,000."

Apart from a good depth of relevant DP experience BIS looks for people who can communicate. As Hunt puts it: "There are lots of people who want to teach, but lack DP skills, and vice versa. That's the Catch 22 in this business."

The call for good experience is echoed at the London offices of Data Training, founded 12 years ago, and based in the Holborn area of London. It conducts 400 to 500 courses a year, mostly in programming, systems analysis and design.

The managing director Peter Curnow said: "I am always glad to hear from people with a good depth of experience who have the potential to teach well. They are not that easy to find.

"At DT we recruit staff with a minimum of three years' experience in programming and/or systems design. Our programming courses are geared towards mainframe users, and we teach Cobol, Assembler and PL/1. Our systems design teachers give courses in structured systems design, and pupils range from beginners to those with a few years in DP."

New staff are allowed two to three months, depending on progress, to settle in to the job. They receive training in instruction methods and techniques, sit in with an experienced teacher, take part of a course, and are then usually ready to undertake responsibility for a complete course.

Currently the company is seeking two to three new staff to teach systems design, but would also welcome enquiries from experienced programmers. Salaries range from £9-15,000.

Teaching apart, lecturers must have the confidence to deal with management on a one-to-one basis. After a course is completed the teacher visits each student's boss to report on his/her performance.

Most of the large hardware manufacturers run courses covering various computer topics specifically tailored to their machines. IBM has a massive training facility at Greenford in London, while ICL trains students at Windsor, Letchworth (Herts) and Manchester. Honeywell's training division is based at *Hammersmith, West London.*

In the past ICL recruited lecturers who did not have direct DP experience. They would receive instruction in the course which they would then be expected to teach.

Those days have largely gone. Michelle Barrons, personnel officer at ICL Beaumont (Windsor), home of most ICL training courses, said: "The trend now is to recruit people with commercial DP experience. We bring them in and then graft on the expertise needed to teach.

"We welcome enquiries from people with good hands-on experience who want to move into training. Salaries depend on depth of experience.

Honeywell tends to recruit its training staff from three sources: firstly from those with management experience in DP; secondly those with teaching experience in computer subjects at polytechnics and schools, and thirdly from people with sound programming and analysis experience.

Nick Philips, Honeywell director of education, said: "Normally we look for people with five to nine years' DP experience, although we recruit two or three graduates every year from university.

"In an average year we take on about 10 teaching staff, but it all depends on demand and staff turnover. At the moment I would like to hear from people with good experience in networking."

Once at Honeywell a trainer's career is not restricted simply to teaching. Many lecturers have moved on to other posts within the firm. These include branch management, personnel management, technical support and selling.

Philips said: "We give new staff training on how to teach, and give them expert guidance on how to apply instructional techniques. They receive some form of training for the first three months and are then responsible for their own courses."

Salaries for instructors at Honeywell lie in the £6-15,000 range. Obviously it all depends on experience. Those at the bottom of the scale are recent university graduates. An experienced DP professional can expect to come much further up the salary ladder.

Control Data has built a sound reputation in the DP training field. For many years it trained Tops programmers, but it does less work in that area now, although it still teaches a number of Manpower Service Commission-sponsored courses.

There is a clear progression process at Control Data training institutes. The career tree starts at *junior lecturer, the next step up is* principal lecturer, above which there is an institute manager. A typical Control Data Institute has two institute managers, one for hardware and one for software. At present there are six institutes in London, Birmingham, Bristol, Nottingham, Leeds and Stevenage.

Control Data's Paddy Carlin said: "The vast majority of our hardware instructors come from the armed services, particularly from the RAF and the Royal Navy. Most have quite a lot of experience, varying from 10 to 15 years.

"On the software side we tend to recruit people with about three years' experience in Cobol. We *tend to find a very low turnover* among our teaching staff, and most of our instructors have been with us for five years or so. Presently we have one vacancy for an instructor in programming."

Training offers the data processing professional the opportunity to pass on his skills to others, a worthwhile reward in itself, and in some fields pays rewarding salaries. But it is a career for the extrovert. To stand in front of a class which may include some high ranking and well qualified students, demands someone with a positive, confident, and outgoing personality.

John Charlton is a reporter on Computer Talk.

RESEARCH AND NEW PRODUCT DEVELOPMENT
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Our clients have created an elite Research Department and require innovative people who can formulate concepts and translate them into commercially viable products.

Projects will include Artificial Intelligence and Knowledge Based Systems, CAD and Imaging Systems, and Integrated/Fibre Optics for applications.

Opportunities exist at all levels for professionals with the ability to provide a positive contribution to new product and technology *research.*

Salaries will reflect the importance of these positions and full relocation expenses are available for those moving to this very attractive rural area where houses and cottages are still sensibly priced.

For an informal local discussion telephone, in confidence, **IAN BAKER on Bristol (0272) 277195** or alternatively write enclosing detailed c.v. to:

The Recruitment Partnership
61 Park Street, Bristol. BS1 5NL
Tel. 0272 277195

(6445)

THE UNIVERSITY OF LEEDS

DEPARTMENT OF COMPUTER STUDIES (OPERATIONAL RESEARCH UNIT)

RESEARCH OFFICER

Applications are invited for the above post for work on interactive methods for scheduling buses and their crews on a microcomputer. Applicants should have a good honours degree in a relevant discipline and a PhD degree or three years appropriate industrial experience. The post is available for a fixed period of up to two years.

Salary on the IA Range for Research and Analogous Staff (£7,190-£11,815) according to age, qualifications and experience.

Informal enquiries may be made to Miss B. M. Smith or Mr A. Wren (telephone no. 0532 431751, Ext. 7181 or 8112).

Application forms and further particulars may be obtained from the Registrar, The University, Leeds LS2 9JT, quoting reference number 48/47. Closing date for applications December 2, 1982.

(6399)

Computer Manager
Barrow-in-Furness
£9,060 to £9,660

Cumbria County Council invites applications from men and women for a Computer Manager at Barrow-in-Furness College of Further Education. The post is wide ranging and covers the functions of operational control, systems analysis and programming. At present the college runs a DEC VAX-11/750 computer running under VMS Operating System and supporting 28 Visual Display Units, which cover both Academic and Administrative functions of the college. Applicants should preferably have two years' professional computing experience with some based systems running BASIC.
Further details and application form, returnable by 21 November, from Vice Principal, Barrow-in-Furness College of Further Education, Howard Street, Barrow-in-Furness. Please enclose s.a.e. when requesting application form

(6405)

Cumbria

MICRO TRAINING CONSULTANT
WEST LONDON £10-£11K+CAR

Our client, the UK operation of this leading micro software company who specialises in financial packages, are seeking a training consultant who can complement their 1983 expansion programme.
The prospective candidate should come from a training environment who can demonstrate *experience in the following areas.*
– Developing and conducting training courses for the dealer and End User Market.
– Experience of ACCOUNTING applications and Office Productivity Systems.
You must be mature, self-motivated, bright and have an outgoing personality with good communicative skills.
An excellent remuneration package is offered including overseas travel, company car, bonus and BUPA.
For more information on the next career move you'll never regret, ring SHIRLEY FRANCIS, quoting Ref: 6628.

(4741)

Lloyd Chapman Associates
123 New Bond Street, London W1Y 9AE. 01-499 7761

Real Time Software Specialists

Farnborough, Hants.
To £11K

Real Time Developments is an independent systems house specialising in high-quality real-time software systems. We have an immediate requirement for a number of real-time software specialists to enable us to expand in line with our plans for 1984.
The people we are looking for are preferably graduates with two or more years experience in any real-time applications. Experience should have been gained on minis or micros, with knowledge of both assembler and high-level languages.
Apart from a highly competitive salary, benefits include BUPA, health assurance and paid overtime. The company offers ample scope for genuine career advancement, with employees being encouraged to assume responsibility as soon as they are ready for it.
1984 holds great promise for RTD; why not be part of our success story? For more details contact Geoff Burnes on Farnborough (0252) 546213 or write to

Real Time Developments Ltd.,
Lynchford House, Lynchford Lane,
Farnborough, Hampshire, GU14 6JA.

BRUSSELS

Permanent vacancy
circa £30K

We are looking for high level candidates with *good management* skills and a minimum of 10 years in DP. If you are already in a senior supervisory or management roll preferably related to an IBM environment and currently earning £15K-£18K in the UK you could be ideal for this vacancy.

An extremely attractive remuneration and relocation package is offered.

Please call Joan Lovejoy for more information on (0442) 40761 or send your full c.v. to Hamilton House, Marlowes, Hemel Hempstead, Herts.

Computer Search & Selection
Computer Search and Selection
Hamilton House, Marlowes
Hemel Hempstead, Herts HP1 1BB

(6517)

NOW

IBM

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	ANALYST PROG
COBOL - OS/MVS - TSO SPF + IMS DB/DC	ANALYST PROG
COBOL + OS/MVS	PROGRAMMER
COBOL + APL + CICS + VM CMS	PROGRAMMER
COBOL + DOS/VSE (4300) + SHADOW + ASSEMBLER	PROGRAMMERS
SYS 36 + RPG III	PROGRAMMERS
MANTIS + COBOL	PROGRAMMERS
IMS DB/DC + OS/MVS + ADF + SOME COBOL	ANALYST/PROG
IMS DB/DC + OS/MVS + COBOL + SOME ADF + TSO SPF	DATABASE DESIGNER
FORTRAN + OS/MVS + COMMERCIAL DEVELOPMENT + CICS	PROGRAMMER
SERIES 1 + RPS + ASSEMBLER	PROGRAMMER
CICS INTERNALS + DEBUGGING (MACRO + COMMAND)	TEST PROG
CICS & ASSEMBLER (MIN 2YRS) + VM/CMS & DL/1 & PL/1	TEST PROG (MVS OR DOS MIN 1YR)
BANKING	TECH AUTHOR
ASSEMBLER + DOS/VSE + CICS + TOTAL + SHADOW	SYS/LMS PROG
ADABAS/NATURAL + DOS/VSE + DEGREE ± COBOL, FORTRAN, CICS	DBA/ANALYSTS PROGS, ANALYST
OS/MVS	SENIOR SYS PROGRAMMER

ICL

2900 + VME/B + COBOL or FORTRAN (2 yrs' min)	SYSTEMS PROGS
SYS 25 + ASSEMBLER	PROGRAMMER
IDMS PREFERRED	ANALYST
COBOL + DME + TPS	PROGRAMMER
S3	PROGRAMMER
DRS + CIS – COBOL	PROGRAMMER
ICL – PC + PACKAGE EVALUATION	ANALYST/PROG
CAFS	DESIGNERS
VME + IDMS ± COBOL ± TPMS/DRS	ANALYST, PROGS
TPMS + COBOL	SENIOR PROG
TP	ANALYST PROG
	ANALYST
TECHNICAL/COMMS [illegible]	PROJECT MANAGER

OTHERS

BURROUGHS + CMS	PROGRAMMER, PROG ANAL
TANDEM	ANALYSTS
DG BUSINESS BASIC	PROGRAMMER
DG + RDOS/AOS + COBOL/FORTRAN	PROGRAMMER
DATASAAB DE16 + COBOL	PROGRAMMER/ANALYST
HP3000 + IMAGE ± COBOL	ANALYSTS, PROGRAMMER
U1100 + DMS1000 + COBOL	PROGRAMMERS
COBOL (GOOD) – ANY MAINFRAME	PROGRAMMERS
VAX + COBOL + SYSTEL	PROGRAMMER
DATAPOINT + DATASHARE + DATABUS	PROGRAMMER
VAX + FORTRAN OR PASCAL OR COBOL	PROGRAMMERS, ANALYST PROGRAMMER
PE32 + BASIC + ASSEMBLER	PROGRAMMER, ANALYST PROG
VAX + PDP ± RSX11M + PASCAL OR RT12 ± CORAL	SENIOR PROGRAMMER
PRIME + TOTAL + COBOL	D.B.A.
8080/85 + ASSEMBLER + MILITARY	PROGRAMMER

SPECIALIST STAFF

VAX + MACRO – 32 ± PASCAL FORTRAN, ALGOL	SYSTEMS PROGRAMMER
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CAD/CAM + PCB EXPERIENCE	ENGINEER
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JOBS IN MICROS

How to migrate from mainframes

By the end of the decade the industry will need 50,000 micro programmers . . . Judith Morris reports

WITH all the current excitement about the micro revolution and the prosperity it promises, programmers toiling away in large mainframe installations could be excused for thinking that their days are numbered.

But for all the noise, many Cobol programmers' jobs have remained much the same throughout this period of change, and the demand for these staff – as witnessed in the job advertisements in journals such as this – show no signs of abating.

This puts the traditional programmer in a bit of a quandary. Does he stick with the sort of job he knows is, at least, secure and reliable, or does he quickly equip himself with micro programming skills to insure against the future?

And, more importantly, how on earth does he do it?

There is a national shortage of microcomputer programmers, for the simple reason that the micro boom came upon us so quickly there was little time for training bodies and industry to react; also, a large but persistent crew of what used to be known as "hobbyists" sat down and produced micro software at a spanking pace.

Micros have also been responsible for a great change of emphasis in organisations which traditionally revolved around a large centralised DP department.

More and more managers are using their own micros on their own desks, and even attempting simple programs for them, with the result that a central body of programmers is not really getting a look-in on the micro scene.

"It is difficult for programmers to find the time to learn about programming micros," explained one concerned DP manager. "We rarely get to know who has personal computers in our organisation, and we in the DP division are the last to get to use them. It is extremely unlikely that, say, a Cobol programmer would start to learn micro programming in an organisation such as this."

"No we can't let you treat your micro as a dependent, and as it does the work of two people we expect it to make a tax return."

So how do programmers make the migration from mainframes to micros, and what sort of jobs can they expect when they have done it?

The most obvious route is to get a job with one of the UK's successful software houses, such as CAP, Logica, or perhaps a micro software company like Peachtree which has recently recruited a large group of programmers and other staff in this country.

They have traditionally had to rely on programmers trained in the mainframe world because no micro programmers have yet been produced.

But although it might seem fairly natural that mainframe programmers should be expected to move over to micros, some would not agree.

Cyril Grant, of the Microcomputer Centre in Sheen, for example, claims that micro programming calls for completely different disciplines and skills than those learnt on mainframes, and programmers from a large Cobol installation, for example, will not necessarily fit in with the world of micros.

Grant feels particularly strongly about the subject because he claims there is a massive shortage of micro programmers and the need for them will grow rather than diminish. He also says there is widespread ignorance about the fact, and that government and industry alike are turning a blind eye.

Companies are buying micros left, right and centre in the present wave of enthusiasm, but few are paying sufficient attention to the fact that they do not have enough staff to program them.

But Grant recommends the hobbyist as the ideal recruit for firms seeking micro programmers, because mainframe programmers have developed a number of bad habits over the years which it is difficult to break when it comes to working with microcomputers.

Hobbyists have usually started as enthusiastic amateurs and progressed to full-time positions.

One of the problems faced by mainframe programmers, who have been used to working in large installations, is that they have become accustomed to plenty of machine space to write their programs while the hobbyist has had to appreciate the size of his program from the start.

Hobbyists who have paid out their own money for a system are also price conscious about software, and are more prepared to sit down and write their own rather than fork out more money for programs.

This training has taught the hobbyist to define his needs and write programs to meet those requirements from scratch with limited resources.

So it would seem sensible for programmers who are serious about micro programming to get their hands on a micro first, and write some basic applications for it, arming themselves with some proof of their aptitude when they visit software houses or other prospective employers.

Companies are buying micros left, right and centre in the present wave of enthusiasm, but few are paying sufficient attention to the fact that they do not have enough staff to program them

But again, there is no hard and fast rule. One manager of a UK software house said that as far as he was concerned, things are changing so rapidly in the computer world generally and the micro world specifically, that no-one can be expected to have relevant experience for a particular job.

Judith Morris is editor of Computer Talk.

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Pay rises by 8.1% and 1984 looks good

John Aczel analyses salary trends — and says the jobs boom is set to continue

SALARY trends in the computer sector have shown an above average increase and have speeded up over the past year. The outlook for further rises also looks promising for 1984, especially as the boom in vacancies for skilled staff is likely to continue during the next 12 months.

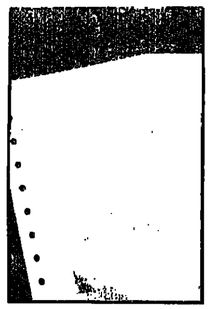
According to a survey carried out by the *Computer User's Year Book*, salaries have gone up by an average of 8.1% for the 12 months ended April 1983 compared with a growth of 7.7% in 1982. Retail prices advanced by only 4 to 5% during that period.

The investigation by the *CUYB* covers over 1,150 computer installations with a total of about 19,000 staff. The survey itself is broken down into various job categories ranging from data processing managers to junior programmers and operators.

Overall, the breakdowns are given in terms of 21 job categories and the salary range in 1983 was from £4,700 to over £13,700 a year. Breakdowns are also provided by regions and by job location.

This investigation, though very detailed, contains certain limitations. The figures are not as up-to-date as one would like. Considerable variations can occur in salary movements even within a short time, and obviously this should be taken into account in assessing the figures.

Some of the biggest increases have occurred for specialist staff who offer highly skilled services. Senior systems analysts and operations managers have seen rises in earnings of more than 10% on an annual basis. A marked growth in earnings for lower paid personnel has also taken place. For instance, data control supervisors have recorded a rise of over 11% while



the biggest increase has been for file librarians.

On the whole, it has been the highly skilled personnel and the managers at the top of the data processing department who have benefited most from the increase in salary, but obviously there have been many exceptions to this rule.

Compared to the remainder of British industry, the computer sector as a whole has moved slightly faster than average. It is estimated that the basic salary in British industry rose by 7.5%, whereas the average increase for computer personnel has been over 8%. But such comparisons have to be treated with care, particularly because of the time element involved in any analysis of this kind.

At present, the gap between salary rises for computer staff and the rest of British industry has widened and earnings for computer personnel are now considerably above average, resulting from the sharp increase in demand for computer staff in recent months.

Fringe benefits now play an integral part of staff remuneration, especially at the managerial level. Company cars are becoming quite widespread in industry and a significant proportion of computer managers now receive this benefit as a matter of course.

According to the survey the overall percentage of DP managers with company cars has remained fairly steady during the beginning of 1983. Thus, 54.4% of all managers had a company car during the current year.

There has been a big increase in company cars among computer managers with a salary of over £19,000 a year.

One factor which emerges from the Reward investigation is that some of the high flyers in the computer industry have been receiving much higher salary increases than the average computer person. In the case of computer managers, the salary figures, according to the Reward survey, have gone up by an average of 11.5% up to August 1983, while the top 10% of computer managers have seen their remuneration going up by over 15%. Clearly firms are now much more selective in the way they grant salary rises and are willing to pay for hard work and ability when reviewing salary levels.

Smaller firms are now giving higher increases than some of their larger competitors. The Reward survey points out that "there are also indications that salary increases in small companies are rising faster than in large ones. This is a reversal of a 20-year trend and is immensely significant for the future style of UK ownership and company activity".

A number of factors play an important part in determining the salary of a computer employee and the Reward survey focuses on such items as company size, regional differences and types of industry. For instance, the average salary for a computer manager is now about £15,000 per year and it can vary by more than £3,000 either way.

The Reward statistics are quite different from those used in the *Computer User's Year Book*. In particular, there are differences in definition and timing, so that comparisons should not be drawn.

John Aczel is a freelance journalist.

TABLE 1: MEDIAN SALARY PER YEAR IN THE COMPUTER SECTOR IN 1983

	1983 £ p.a.	% increase
Data processing manager	14,727	9.1
Chief systems analyst	13,000	7.7
Chief analyst programmer	11,440	2.0
Senior systems analyst	11,650	10.1
Chief programmer	11,137	9.1
Operations manager	10,643	10.7
Senior analyst-programmer	9,863	3.8
Systems programmer	10,143	9.4
Systems analyst	9,531	3.7
Senior programmer	9,500	6.8
Analyst-programmer	8,750	8.4
Chief operator	8,166	8.9

Source: Computer Users' Year Book

TABLE 2: PROPORTION OF MANAGERS WITH COMPANY CARS

	1983 %	1982 %
All DP managers	54.4	55.7
Those earning under £13,000 per year	41.9	43.7
Those earning over £13,000 per year	63.5	64.5
Those earning over £19,000 per year	75.9	72.6

Source: Computer Users' Year Book

TABLE 3: MEDIAN BASIC SALARY IN SEPTEMBER 1983, BY COMPANY SIZE

	Computing manager £ p.a.	Senior systems analyst £ p.a.
By company turnover		
Up to £5 million	13,386	9,750
£5-£15 million	12,756	10,500
£15-£40 million	14,334	10,527
£40-£100 million	16,813	11,760
Over £100 million	17,400	12,109
By company size		
Up to 200 employees	15,000	11,100
201-500 employees	14,292	11,000
501-1,000 employees	15,950	10,527
1,001-4,000 employees	15,754	11,200
Over 4,001 employees	16,799	12,213

Source: Reward Regional Surveys

TABLE 4: MEDIAN BASIC SALARY IN SEPTEMBER 1983, BY REGION

	Computing manager £ p.a.	Senior systems analyst £ p.a.
Eastern Counties	12,250	9,884
London GLC	17,147	12,625
North East	14,808	9,881
North West	14,700	11,892
Scotland	18,000	12,000
South East	15,000	11,252
South West	13,578	11,250
West Midlands	11,702	10,000

Source: Reward

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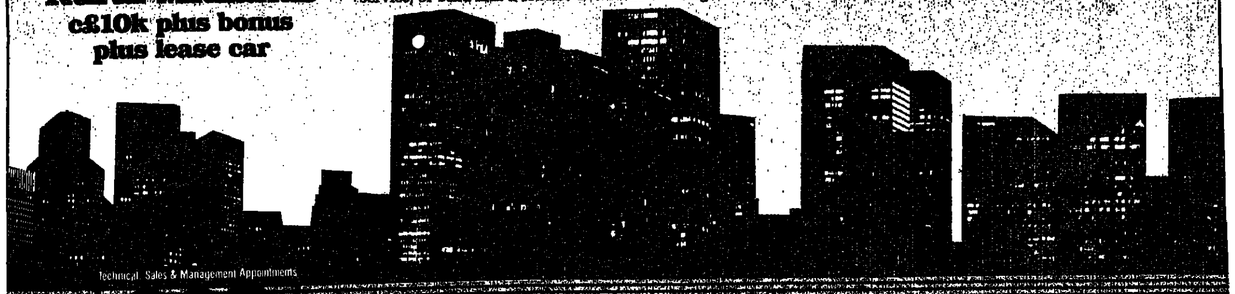

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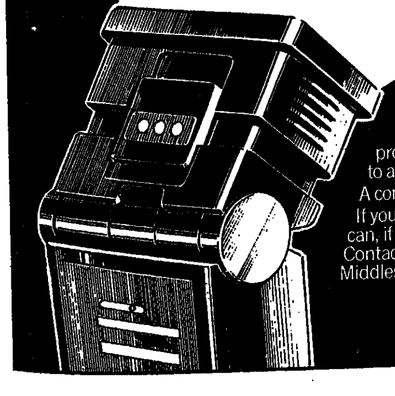

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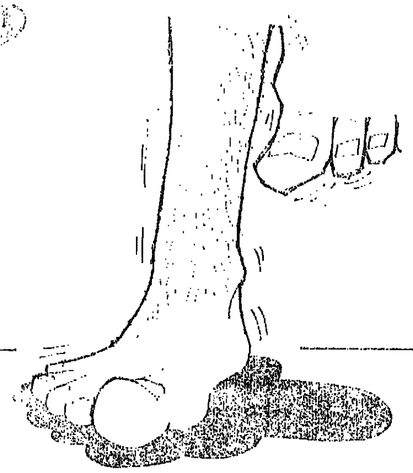

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The closing date for applications for the above post is 30 November 1983
(6476)

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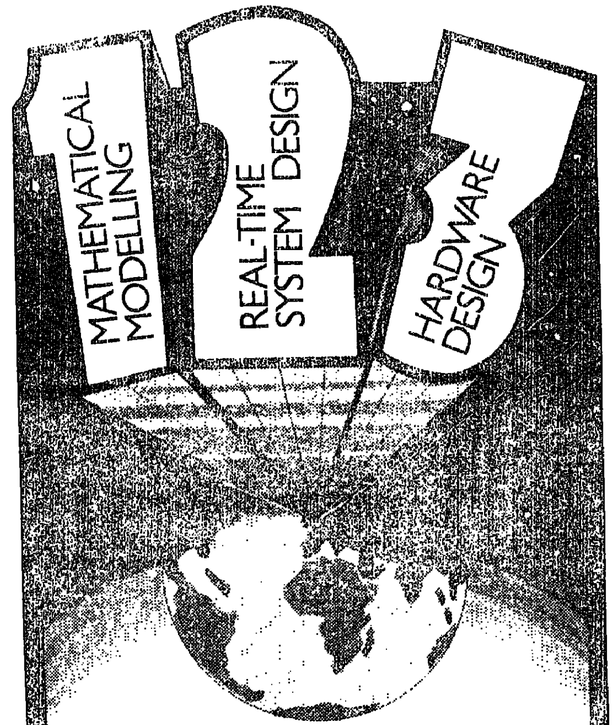

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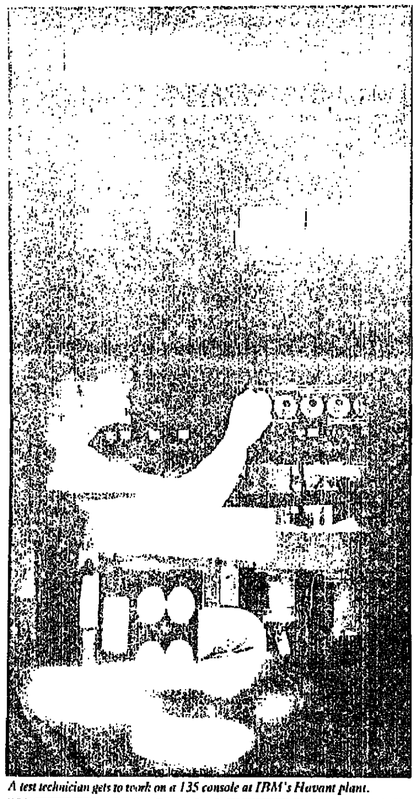

A test technician gets to work on a 135 console at IBM's Havant plant.

There's always a job for the technicians

John Riley finds the third party maintenance sector in a thriving state

ONE area of the computer industry that enjoys a steady and relatively secure growth is third party maintenance. That is the sector that keeps the industry ticking over by making sure the hardware keeps running.

The third party maintenance companies maintain new machines as well as old ones.

Computer manufacturers offer maintenance, but their charges tend to be high, and can be as much as three times what a specialist third party company will charge. That is why many cost-conscious users take out contracts with third party companies to maintain their equipment.

Although the shelf life of a computer system averages about five years, the life with users can be 15 years or more. Manufacturers tend not to keep permanent staff to maintain old machines, and in practice often sub-contract to the third party maintenance companies.

As a result, the third party companies are usually able to maintain a full range of equipment from punch card machines to computers straight from the factory.

One of the largest maintenance companies is CFM (Computer Field Maintenance), which has contracts ranging from microcomputers through to mainframes. "We are chugging on and growing very steadily," said a spokesman. CFM recently won a £1 million a year contract with British Telecom to maintain its computerised directory enquiry system, and among its customers are other large companies like Barclaycard.

CFM looks for engineers, but not necessarily graduates. "University graduates have the wrong attitude," said the CFM spokesman. "They want to find the root of the problem rather than aiming to get the machine going in the quickest possible time.

University graduates have the wrong attitude. They want to find the root of the problem rather than aiming to get the machine going in the quickest possible time

"We look for people with technical knowledge, and a knack for engineering, as well as the ability to get on with people. They have to have the right attitude as well as an aptitude for engineering," he added.

CFM finds that it has a lot of ex-Service personnel among its staff. Other people attracted to the company – and the industry at large – include engineers from other companies who are "bored with the product line or finding themselves moving out of engineering and more towards marketing or some other activity as they get promoted.

"With us, all the area managers are engineering people and enjoy an engineering challenge," added the spokesman. "CFM is about engineering."

The company places great emphasis on its own training programme. "We have our own training school near Crewe, and we invest a lot of cash in training," he explained. "On average, every engineer gets one month's training each year."

Kode Services, another top third party maintenance company, also takes on a lot of ex-Service people. "They have good experience of older electro-mechanical equipment," says general manager Brian Brown. "We like to recruit people in their forties as most young people are trained in electronics but not in mechanics. The older group is more ready to get its hands dirty."

Kode, like CFM, looks to engineering aptitude and general experience, rather than paper qualifications. "Experience is a better criterion than formal qualifications," says Brown, "as we take on a broad spread of people depending on where we want to slot them."

Kode takes on a "constant stream" of young people straight from school.

The 160 strong workforce has an average staff turnover of 10-12% each year, according to Brown, who says: "Field service engineers are in demand all the time. We have one or two vacancies most of the time."

Third party maintenance staff enjoy similar conditions to those in other industries, although the work is more secure. A popular perk, according to Brown, is a company car: "All engineering staff need to be mobile," he says.

Smaller maintenance companies are finding it hard to get good engineers, however, especially for some areas. "It's the economic climate," says Peter Lamb, engineering manager of Trident Computer Engineering. "After, say, eight years with Digital Equipment or Honeywell, engineers aren't going to move, and in any case the big companies know how to keep them."

Lamb says it is particularly hard to find people who are willing to work in central London or in the north. "Most computer engineers in London are bachelors," he said, "and as soon as they get married, they end up buying a house 35 miles away and soon find a local job, say in Reading or north Hertfordshire."

Trident aims to get "factory trained" engineers, but is also looking for younger people with aptitude, around the age of 25, to go out to sites with support staff to gain experience.

Although companies such as Kode and CFM maintain the hardware, they tend not to maintain software. They will help to sort out whether problems are hardware or software, however, and the companies find that with experience, engineers get to know where the software problems are.

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Closing date: 30th November, 1983.

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COPELAND BOROUGH COUNCIL

(6416)

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US prizes British standards

Ron Coates finds out Britons are in demand across the Atlantic

THERE can be few DP staff in the UK who have not toyed with the idea of taking a job in the US.

And judging by the way that major UK recruitment and contract agencies are opening up offices in the US, there must be more and more British computer staff who have decided to make the jump.

According to agencies like Tangent, Trident and VLI, British programmers and analysts are gaining a very good reputation in the US. John O'Sullivan, chairman of Trident, said: "They are finding that the Brits – that's what they call them out here – have a higher standard technically and are more competent, though they'd probably kill me for saying it."

The skills in demand in the US tend to be the same ones that are in high demand in the UK; any telecommunications and network, database, online and IBM CICS. IBM experience is almost a prerequisite and the demand for good CICS experience has seemed almost bottomless in the UK contract market.

The type of people who go to the US from here have been traditionally regarded as being the young and single with three, four or five years' experience, who wish

There is often an informal system for helping new arrivals

to broaden their technical knowledge and have a good time doing it. One mildly cynical agency man described the typical applicant as being "single or almost divorced".

But this is beginning to change. When VLI gained a contract last year to supply around 50 people to a major insurance group, it found that at the end of the day the young and single stereotype did not fit.

Then the balance was 34 couples, against 11 single people. A VLI spokesman remarked at the time: "But, of course, our client was looking for some very experienced people."

The attractions of the US go beyond the fact that it is seen as an exciting place by single Britons. The Americans have a very good reputation for hospitality, so the general atmosphere is attractive.

There is also a large number of advanced projects being installed in the US, so that a contract there can be very exciting technically. It is also a good chance to make money. US taxes are generally lower than they are in the UK, most things are less expensive and the pay is higher.

For the contractor the average rates would be around £400 or a bit over a week plus expenses, which could run to a further £200 a week.

The British are even getting a reputation for liking and enjoying places that most Americans don't like, such as Philadelphia and Chicago. But some spend only a very short time in the US and the consensus between the agencies is that most of the small minority who return do for either family reasons or home-sickness.

O'Sullivan said: "It's not that they don't like the work or the US. Some of them just find that they like Britain more. I think that they themselves find it a bit surprising, but there it is.

"But the majority of them, after the first month, get right into the swing of things. They pick up an American accent, or what they think is an American accent, and become more American than the Americans."

The general reason given for the high regard that British DP staff enjoy in the US has been that US DP departments have generally had large budgets and larger machines than their UK counterparts. The UK programmers and analysts on the other hand have always been under more pressure to get more out of their hardware. This has developed their technical skills and general resource.

Most agencies now take a great deal of care over the people they send out to the US. As they are now developing their own network of local offices they are on the spot to deal with any of the obvious immediate problems, such as late cheques and extension of contracts.

They now go to a great deal of effort to help the freelancers get settled in by finding accommodation, cars, etc, and setting up arrangements for local banking and medical insurance – one of the big musts in the US.

And because American contracts tend to be for larger groups of people than those in the UK, in tens rather than four or five, there is often an informal system of helping new arrivals cope with the US by expatriates who are already there.

There is, of course, one major problem about getting a job in the US. American immigration regulations are stiff and the bureaucracy which runs them is not particularly swift. Visas are granted generally only to people who have a clear and evident aim of eventually returning to the UK.

And even if you can get a visa to work, it is as well to remember that your husband or wife may not be so lucky.

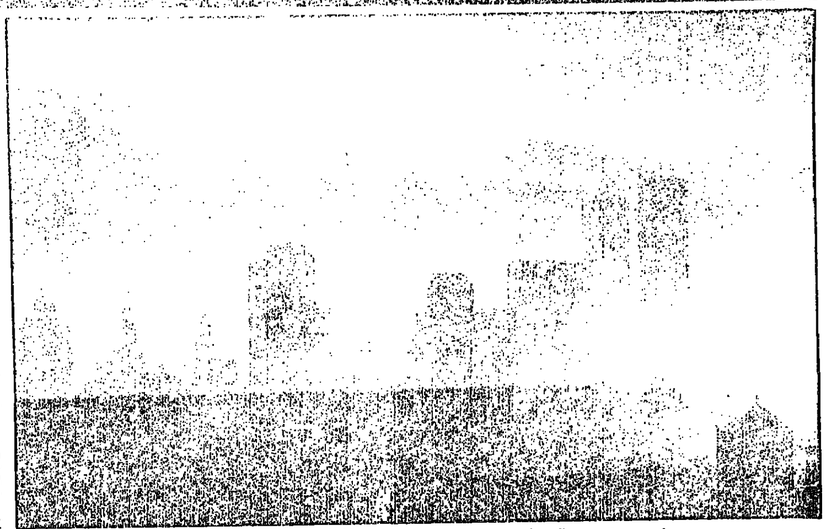
The delay on visas is currently between two and 12 weeks and is mostly closer to the larger figure.

O'Sullivan said: "You just can't forecast how long a visa will take. You could send the details in on twins with the same qualifications and you wouldn't know when you'd get the applications back."

This sort of delay causes two problems. The first is that the US client of the agency may get tired of waiting for the UK staff to get visas. The second is that the individuals in the UK can get fed up as well.

But the working visa is essential for anyone who does want to work in the US. The application of the regulations has been very much tightened up since those days (if they ever existed) when large numbers of people went to the US on holiday and came back claiming to have worked for three months.

US employers have had enough problems with people who have tried this little trick to discourage them from being bitten again. The UK agencies are eager to stay in business in the US and the majority of them ensure that their staff get the right kind of visa and renew it properly.



There is a large number of advanced projects being installed in the US, so a contract can be exciting technically, as well as socially.

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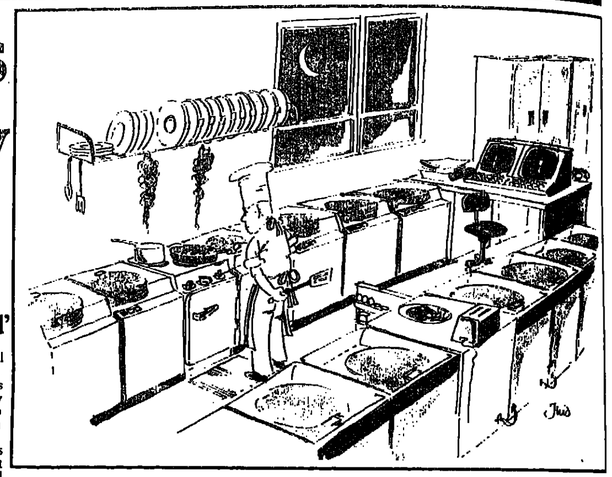
BARCLAYS

(6491)

Tales of the op's death are greatly exaggerated

With apologies to Mark Twain, Margaret Park demolishes some of the scare stories about 'a dying breed'



OPERATORS tend to be denigrated these days for being in a job that is nearing the end of its useful life. But as more technical progress is made, there are still no signs of them being wiped out en masse.

Operations managers tend to dismiss the scare stories by pointing to similar tales, even more obviously untrue, about the death of the programmer who is, according to some, in danger of being killed off by program generators and advances in user-driven software.

It's true that today's computers need less operating skills than their predecessors, but at the same time the sheer number of computer departments in the country is increasing and most DP employers think operating jobs are good for another five years at least.

But operators are being hit by the low turnover among computing staff in the same way as every other grade.

Phil Reid, operations manager at London-based Rolfe Nolan Computer Services, points out that, rather than disappearing altogether, the operator's function is changing.

"The operator's role is different now," he says. "Operators are becoming less responsible because they have less to do with running the actual machines. Instead, their function is to control the computer's output."

So with the demise of the batch system, operators are no longer machine minders, inputting at keyboards or punch card machines. The operator's job has become more administrative. The real time system largely runs itself so the operator simply collects its output and is responsible for directing it to the user.

This means that operations is no longer a team function. Where there were once half a dozen or more operators on each shift in the computer room, now there is likely to be just one. And quite large installations manage with only three or four taking turns on shifts.

Rolfe Nolan Computer Services, though, is one firm that has increased the number of operators it employs because of its growing business.

"Two years ago, we only had four operators, now we have eight," he says.

Rolfe Nolan supplies services to commodity brokers and financial institutions in the City of London.

Recently, an extra DEC has been brought in to cope with a new in-house system devised to help support the company's bureau users.

A lot of individual tailoring is being done to the system to suit the needs of users who demand particular results from the service – additional printed reports for example, which require more operations staff to manage the output.

Ray Halligan, data processing manager at another London company, Provident Life Association, says that turnover among his operations staff is very low. When recruiting, he looks for operators with previous experience on the kit used in his department.

"We've recently moved from ICL 1900s to 2900s under DME," he says, "so ideally I want people with a knowledge of both, and also with preferably some experience of the operating system George 2 Plus."

Halligan forsees a long-term rundown of the operator's function but estimates that this will take at least five years.

"The emphasis of future computing work will come from outside the machine's environs," he says, "rather than from inside the computer room.

"Now people have the equipment and the ability to submit their own jobs by means of quasi-remote job entry and by the greater use of online systems," he added.

Senate Computer Services says it has not needed to take on any new operators for over a year – the same story of low staff turnover. A spokesman for the company said in a futuristic tone that Senate is geared to getting machines working rather than people.

"Operators are required less now than in the old days," the spokesman added.

"There'll always be a need to have someone watching the machine, but the days of changing tapes and so on are over now, it's mostly just a watching job."

Senate only employs three operators working single-handed on two shifts a day and looking after five machines.

But if the operator has not been dismissed completely as a dying breed, his function in the computer department does sound increasingly dull.

Anyone considering operations as a career, unless endowed with a meditative nature, would do well to make sure that any prospective employer offers a chance of promotion into the less sedentary role of programmer.

Once upon a time, few self-respecting data processing managers would consider sweeping operators up from their lowly ranks to be turned into programmers. But now this snobbish attitude is fast disappearing along with the idea that a good programmer comes exclusively from a mathematical and scientific background.

Programmers are just as likely to be drawn from arts backgrounds. Some employers swear by them, preferring to take trainees with open minds uncorrupted by previous contact with computers.

And a number of employers now say that when taking on operators they choose those likely (at some future point) to have an aptitude for programming.

Operators, it seems, can benefit at the moment from opportunities in companies where computing activities are expanding, particularly in the London area.

Margaret Park is deputy editor of Computer Talk.

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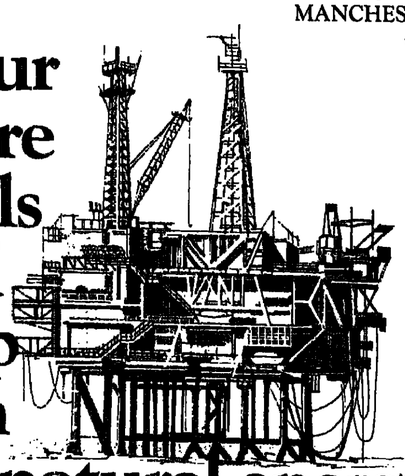

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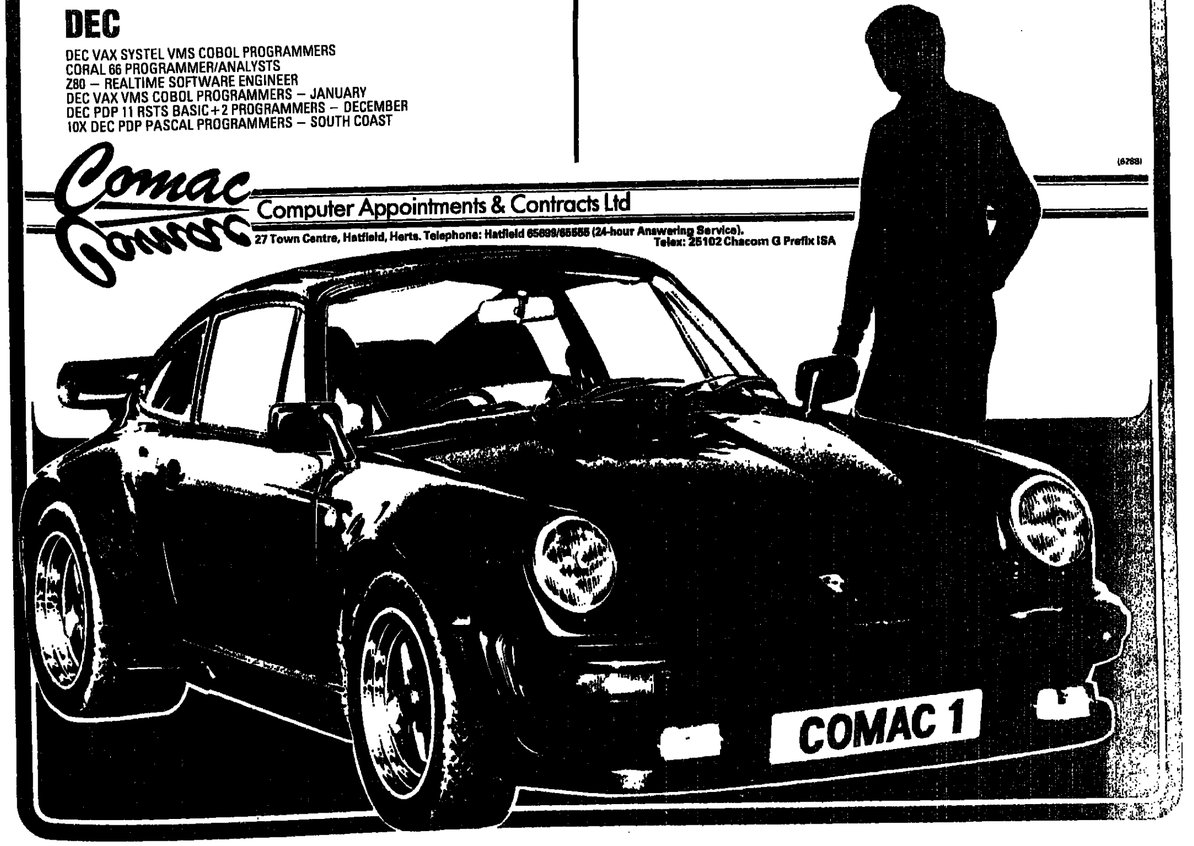

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IBM COBOL WEST END To £11,500

Unique opportunity with this petroleum firm to get more involved in user liaison, analysis and consultation work. Two years' + IBM MVS COBOL is required, and a flexible and tactful personality is essential. You will be liaising with users throughout the UK and Europe, consulting programmers and designers, evaluating hardware, working on your own initiative, developing systems from scratch. Really unusual opportunity with great career prospects. REF. CW/3520

SALES & MARKETING PL/1!
MIDDLESEX £10,500

My client offers a superb opportunity to join a successful British company who are now expanding their D.P. Department. They are developing a number of systems on their sales and marketing side, and require an additional PL/1 Programmer/Analyst with a minimum of two years' IBM experience, preferably with working knowledge of MVS and on-line techniques. They will give you further training in advanced programming techniques including CICS, with the opportunity to develop your analytical skills. REF. GW/2161

MVS SYSTEMS PROGRAMMER
BUCKS/SURREY To £14,500

Experienced systems programmer required with two years' + MVS, JES2 TSO experience, and preferably knowledge of SPF, ACF 2, VSAM or NJE. Excellent salary, relocation package, five weeks holiday, flexitime, sports and social club. REF. CW/2974

SYSTEMS PROGRAMMER
ESSEX To £12,500

Due to continued expansion, this leading London based company is looking to recruit top class programmers and analyst-programmers with 18 months' + IBM COBOL background and preferably with CICS and/or DL/I. A first class career move as the work is 99% development, and offers the opportunity to gain more analysis experience. If you fit these requirements and would like to secure a responsible role with a go ahead company please contact me for further details. REF. GW/2970

ANALYST PROGRAMMER c.£9,500

A vacancy exists within this prestigious manufacturing concern for an IBM COBOL programmer. The company retain dual IBM 4331's running under DOS/VSE utilising CICS and DL/I supporting a national VTAM network. CICS and DL/I would be a distinct advantage, however the emphasis is on inter personal skills, plus ability and potential. If you fit the criteria and you want to progress in your career, and enjoy working in a friendly and professional environment then why not give me a call. REF. GW/9226

IBM BERKSHIRE £7,500-9,500

Three leading opportunities with Reading, Slough and Bracknell based organisations, housing IBM 4341's. Programmers should have 18 months' + IBM COBOL gained in an MVS, DOS or VM environment and some on-line experience. You will be trained in database techniques and given every opportunity to take a step upwards in your career. BUPA, five weeks hols. and discount on company benefits. REF. CW/2220

IBM (MORTGAGE & RELOCATION)
HANTS To £11,000

International Hampshire based financial company housing an IBM 4342 with MVS, TSO CICS and DL/I have an outstanding opportunity for an IBM COBOL programmer who has some exposure to analysis. You should be well educated and able to work in a team environment developing a range of on-line systems. Structured techniques would be an added advantage, but more important you should be career minded, self motivated and have the potential to become a senior analyst/programmer. An excellent benefits package is offered including a subsidised mortgage and full relocation expenses. REF. GW/2491

ASSEMBLER PROGRAMMERS
To £10,500

This manufacturing company situated in South East London are currently seeking a number of programmers to enhance their development team. The organisation runs on IBM 4341 under DOS/VSE and is seeking two programmers with a variety of skills including any of the following: VM, CICS, IDMS, VOLLIB, COBOL. This knowledge coupled with your 18 months' + ASSEMBLER would be ideal. Includes five weeks holiday, company pension, BUPA and subsidised lunches. REF. EW/2925

IBM PROG/ANAL HERTS c.£9,500

Due to continued expansion my client on the Herts/Middlesex border are currenty recruiting an additional member of staff to enhance their development team. The essential requirement is for someone with 12 months' + COBOL preferably with exposure to IMS and/or DL/1. This is an interesting and challenging position with good salary and excellent career prospects. If you have proved yourself in a manufacturing environment and are now looking to take a further step up the ladder of success, please give me a ring. REF. EW/2933

ANALYST
NEW IBM SITE To £13,000

My client is a renowned British retail firm, moving to the Bucks/Beds./Midd'x borders in January. They seek a systems analyst with three years' + analysis experience gained in an IBM CICS environment. You should be in the 20-30's age range, able to write specs, design on-line systems and liaise confidently with users at all levels. Sports and social club, restaurant, discount on products, relocation assistance, excellent pension scheme and health insurance. REF. CW/2587

OTHERS

VAX EXP-ANY LANGUAGE £EXEC

An exciting opportunity has arisen for individuals with VAX experience to move into systems work. My London based clients will provide extensive training to the right applicant with the aptitude and desire to become involved in user liaison, analysis, software development and in the senior roles, Systems Management. The department is currently around the DEC VAX 11/780 which is the largest in Europe at the moment. The successful candidate will be offered a competitive salary, staff discount on [illegible] restaurant facilities. REF. AW/2884

TP £14,000

Expanding company based in Herts are currently seeking HP3000 professionals from junior programmer level through to senior analyst/programmer to become involved with major development work on commercial and financial systems. The company offer excellent prospects to progress into management, a competitive salary plus a substantial benefit package. You should be able to offer 12 months' – five years' HP COBOL expertise. REF. AW/2816

SENIOR PROGRAMMER/ANALYST
£NEG

Ground floor opportunity for a programmer with a good educational background coupled with a minimum of six months' HP3000 COBOL experience to join a successful West End financial company and become involved with major new development projects. This company will give the successful applicant all the backing necessary to progress both on a technical and a personal level. REF. AW/2958

HEWLETT PACKARD
COBOL To £12,000

As an Analyst/Programmer within this City based distribution concern. You will be developing new financial and commercial systems from initial user contact stage through to implementation. The successful applicant must have two years' + D.P. experience with in depth exposure to HP3000, COBOL, IMAGE, VIEW and QUERY. If you are an enthusiastic and capable D.P. professional looking to persue a worthwhile and interesting career that offers the opportunity to progress into management – call now. REF. AW/2792

MINI EXP
SOFTWARE HOUSE To £15,000

My client, a small well established City organisation is currently embarking on a long term major development with direct links to a well know computer manufacturer. They have two requirements, one for an analyst/programmer with good banking or financial background plus several years COBOL on any mini. This is a new post and offers an excellent opportunity for real career development in a challenging and expanding area. They envisage a salary of £15,000 for the right candidate. Secondly they seek an ambitious programmer with 18 months' + solid COBOL, preferably on a mini. Excellent prospects and career path for the right person. The salary will be commensurate with experience up to £10,000. REF. MW/6600

NEW DEC INSTALLATION
MIDDLESEX £NEG

This market leader in its field has just taken delivery of 2x DEC PDP 11/23, and are consequently seeking to recruit additional members of staff. The essential requirement is for two years' BASIC + experience, hopefully gained within a RSTS/E environment. You will be involved with the development of new commercial systems including stock control from feasibility through to implementation. If you want to work on new systems, in a new installation then call now for further details. REF. AW/2954

ICL 2900 SYSTEMS £EXCELLENT

Due to planned expansion in 1983/4 an outstanding opportunity exists for programmers, analysts and project leaders with good experience of ICL VME, IDMS and TPMS to join the systems development team of this leading City based insurance company. Company benefits include flexi-hours, subsidised mortgage bonus schemes plus the security of working for a long established, well managed professional organisation. REF. DW/2842/5

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For an experienced programmer to join this established London based Engineering firm. The requirement is for two years' + ICL ME29, TME/MTS, COBOL and PLAN expertise. A knowledge of manufacturing/engineering systems including Production Control would be highly advantageous. In return the company offer a generous salary along with a full benefit package including relocation assistance where appropriate. REF. DW/2993

ANALYST/PROGRAMMER
BERKS c.£11,000

There exists within this leading engineering concern a superb opportunity for an analyst/programmer with three years' + exposure to DEC systems to take up a key position within this new team engaged in commercial development. The successful candidate, in addition to solid DEC/Systime experience will have proven systems analysis expertise. Training is given in DIBOL, and there is every opportunity to gain promotion into management. Excellent benefit package including BUPA, Pension Scheme and subsidised restaurant. REF. AW/2182

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Applicants must be able to demonstrate a high degree of technical competence (preferably on IBM System/34, /36, /38 computers), a sound understanding of business, and the ability to work with system users in developing and implementing large scale projects. You will be expected to accept total responsiblity for projects to which you are assigned, including control of the project teams.

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Applicants should possess sound programming skills preferably in RPGII and/or RPGIII. (Other languages will be considered if applicants demonstrate the ability to learn quickly). Systems experience in a business environment is preferred. These positions offer work on both package implementation and bespoke systems, together with a career path into senior responsibilities.

The company, whilst at the fore-front of its market, is still small enough to allow its staff to play an active role in its growth and success and therefore, career prospects are excellent.

For further information, please telephone Andrew Cousins at the Reading office, or write enclosing full c.v. Interviews will be held in Central London or Reading.

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London & East Anglia — Banking, COBOL, IMS DB/DC; Commercial, PL/1, CICS/DL1; Financial, VRX, COBOL, TRANPRO; Financial, TSO/SPF and on-line exp. Contact: Robert Collier	Ref 06/01	**London or Home Counties** — To work on the development of operating systems; data comms; CAD/CAE; compilers etc. Experience of real-time programming using CORAL, UNIX/C or Assembler would be advantageous. Contact: Colin Maslen	Ref 06/04	**London & Home Counties** — A number of clients have openings for Systems Programmers (min 2 years) with: MVS/Assembler or CICS or X28 and PSS experience. Contact: Robert Collier	Ref 06/03
SYSTEMS SOFTWARE ENGINEERS	£8-11K	**CONTRACTS U.K. & ABROAD**	£Neg	**TECHNICAL AUTHORS**	£8-14K
Middlesex or Berkshire — The successful candidates will have extensive experience of 8/16 bit operating systems and device drivers plus BASIC, CP/M and Assembler. Contact: Jean Sandercock	Ref 06/07	**Analyst/Programmers** — RPG II & III — Holland & UK; MVS, Assembler — Berkshire; COBOL, CICS, DL1 — London; HP 3000, RAPID — London; MVS, XA, JES2, RACF — Germany, very urgent £V.neg. Contact: Robert Collier	Ref 06/02	**Nationwide** — Lots of work for the right knowledge. Electronic & office automation. Team Leaders — commercial applications. Aerospace/Radar Systems. Electro-medical systems. Contact: Jean Sandercock	Ref 06/06
SOFTWARE DESIGNERS	to £14K			**HARDWARE DEVELOPMENT ENGINEERS**	to £18K
Herts or Beds — To join the development group of a major mini-manufacturer you will have experience in LAN architecture, and real-time programming at hardware interface level. Contact: Colin Maslen	Ref 06/05			**Home Counties, Paris** — To work on the design and development of advanced digital circuitry for Weapons Systems. In Paris experience of Z80 for new games micro is required. Contact: Colin Maslen	Ref 06/08

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PERMANENT OPERATIONS

IBM POSITIONS

SHIFT LEADER — SURREY

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SENIOR OPERATOR — CITY

A large foreign banking concern need an experienced person with at least two years' DOS/VSE under VM. Knowledge of POWER and CICS is preferred. Usual banking benefits coupled with a salary of up to £10,800 make this a first-class position.

OPERATORS — CITY, SURREY AND ESSEX

A number of 4341 sites are looking for good DOS/VSE and VM/CMS people. A minimum of one year's experience could bring up to £8,500.

SYSTEM 38 OPERATOR — BERKSHIRE

A days-only position paying £7,000 exist with this large cosmetics/pharmaceutical company. Communications experience would be an advantage.

SYSTEM 34 OPERATOR — MIDDLESEX

One year's working knowledge of OCL is required for this two shift site on the Middlesex/North West London border. The salary for this position is £7,500.

ICL POSITIONS

2900 OPERATORS — LONDON & HOME COUNTIES

Get on the VME Bandwagon! We have several positions with companies operating VME already or who have definite plans to go to VME in the near future. Salaries are up to £10,000 with various company benefit schemes.

ME29 OPERATOR — SURREY

Due to promotion to programming, this site on the Surrey/South West London border require an operator with one year's ME29 experience. Work two shifts and earn up to £8,000.

2903 OPERATOR — W. SUSSEX

Due to relocation an experienced 2903 operator is required by this site which will shortly be upgrading to an IBM 38. Good prospects and a salary of £6,000 are on offer at this days-only site.

OTHER POSITIONS

NCR OPERATOR — CITY

Good VRX is needed for a leading foreign bank. A subsidised mortgage is one of the benefits as well as a salary of £8,000.

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Two banking organisations require operators with 18 months' AIMS or RSX 11M to work in the City or Surrey. Normal bank benefits and salaries of up to £8,000 will be paid.

CONTRACT OPERATIONS

Contact our Contracts Team and help them fill urgent requirements for:

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IBM 3083	MVS JES 2	OPERATORS
IBM 4331	DOS VSE	OPERATORS
VAX 11/780	VMS	OPERATORS
IBM 3031	VM VSE CICS	OPERATORS
UNIVAC 9030	OS3	OPERATORS
IBM	SYSTEM 34	OPERATORS
DEC PDP	11/70	OPERATORS
H.P.	3000	OPERATORS
Burroughs	B6900	OPERATORS
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IBM	SYSTEM 34/38 KAPITI	OPERATORS

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SENIOR EDP AUDITOR — SURREY — c.£14,000

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IBM SYSTEM 38 RPG III	ANALYST/PROGRAMMERS
IBM WITH ANY TP AND DATABASE	ANALYST
IBM COBOL CICS DL/1	ANALYST/PROGRAMMERS
IBM FORTRAN	ANALYST/PROGRAMMERS
HONEYWELL COBOL DPS7 TPS/IOS	SENIOR ANALYST/PROG.
HONEYWELL L66 COBOL DM4	PROGRAMMERS
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ICL IDMS	DESIGNERS
DEC PDP/VAX AIMS	ANALYST/PROGRAMMERS

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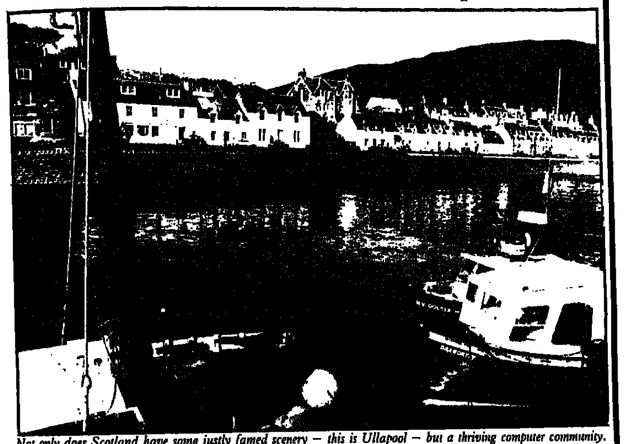
JOBS IN SCOTLAND

Keith Holder finds the Scots accent is an experience



Not only does Scotland have some justly famed scenery — this is Ullapool — but a thriving computer community.

It takes a keen eye to spot a job North of Border

ANY casual observer of the appointments pages could be forgiven for thinking that Scotland offered no prospect of employment at all. This is not the case, and while the country may not be brimming over with unfilled vacancies it does support a thriving computer community.

There are, however, some aspects of Scottish life which mean that a keen eye is needed to spot vacancies and these are by and large for people with fairly specific experience.

Peter Brown, employment consultant for Computer People North, summed it up: "Scotland is a more cautious environment for employment in computing. The Scots are a fairly tight breed and only get around to advertising when it becomes absolutely necessary."

He said that the main area of demand was for people with a technical background though there were places for commercially experienced personnel, mainly in banking and insurance.

The latter, he added, had been hit hard by the recession and as a result, recruitment in this area had shrunk noticeably.

This situation is compounded by a secondary effect of the recession: movement of staff is slower.

"People who are settled in a secure job are mindful of closures that have taken place here over the last two or three years," said a spokesman for Scottish Life Insurance.

These positions, when they do arise, are almost exclusively for software engineers and programmers. Hardware engineers are considered in very low demand, a situation made more acute by the closure of ICL's Dalkeith factory and redundancies in the past by NCR and Burroughs.

Even for software engineers, the requirements of potential employers are stiff. "Most vacancies specify two to three years' experience, usually in the same field," said Brown, "and the trend at the moment shows high demand for manufacturing and military experienced personnel."

Outsiders face another barrier, said Brown, in that the computer user associations, which are split regionally in Scotland, virtually cover the whole country, creating closer links between members over a wider area.

This has developed into an efficient grapevine which can often pre-empt vacancies and prevent them from reaching outside other than in token advertisements.

Military systems companies are doing well in Scotland and this is reflected in a higher percentage increase in vacancies over other areas of the market.

Among the companies supporting this trend are Marconi and Ferranti though even here, finding a job is not simple. A spokesman for Marconi said: "We are looking for people, mainly analysts and programmers, with three to four years' experience and with a mainly manufacturing or financial background."

He added that experience with Digital Equipment Vax systems, used by the company, was also fairly important.

Ferranti has similar requirements for experience, though a spokeswoman said that it could afford to be choosy and specify previous experience in broadly similar work when looking for new staff.

Senior positions tend to become vacant very rarely and are usually filled by headhunting from rivals.

Though there is some opportunity for the inexperienced, it is worth noting that out of 70 potential places offered during the company's recent graduate recruitment, only a few places were specifically for computer applications.

Recruitment in this area also takes place within a fairly tight group of companies, because candidates are often headhunted by rival firms.

This is particularly true for more senior positions such as DP managers and operations managers.

According to nearly all companies questioned, the senior positions tend to become vacant very rarely and are usually filled by headhunting from rivals. Here again, the user group grapevine is seen as being particularly effective.

Apart from the military, there is a healthy requirement for programmers and systems engineers in the manufacturing industries according to Neal Drummond, of recruitment consultants ATA, particularly in the East.

Companies such as Distillers, which has its group headquarters in Glasgow, confirmed this. A spokesman said that it was important to hire people who would be useful from day one; they also tried to offer a limited number of places to recently qualified people.

Brown, on the other hand, thinks that while a large number of these industries are using computers, they are particular about getting qualified staff and rarely are prepared to look at anyone else.

One area which seems to be winding down its recruitment is the oil and gas industry, which now recruits on a demand basis. In keeping with other industries, this tends to be more infrequent than in other areas of the UK.

The range of computers used by Scottish industry is wide, even within some of the larger organisations and high technology industries. John Duncan of Ferranti said: "We have a requirement for people to work on a number of different machines ranging from Apples and Pets right up to the bigger mainframes."

Staff requirements can, he said, fluctuate at the lower end of the spectrum depending on how many small projects are running, but is almost static for staff on larger systems.

Salary levels, according to Drummond, hold up remarkably well against those in other areas of the UK including the south-east and London. But this does not mean any special advantage as the cities, particularly Edinburgh, are quite expensive places to live.

In conclusion, the general consensus is that though far from being non-existent, job opportunities have to be actively searched for. They do exist in numbers for those already qualified in software and data processing, mainly in manufacturing industries and defence related projects.

All in all, if you do not already live in Scotland you have to be pretty determined.

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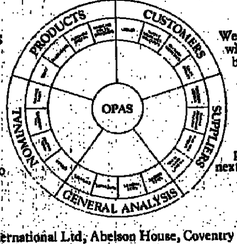

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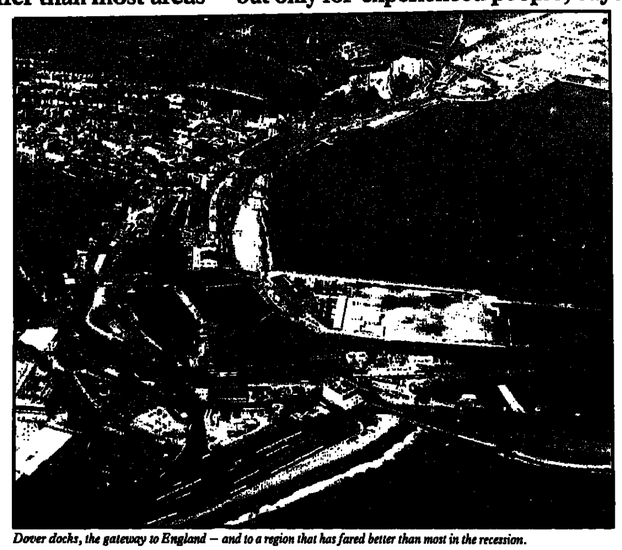
(6511)

JOBS IN THE SOUTH

Southern England has more jobs on offer than most areas – but only for experienced people, says Caroline Burgess

Recession has made employers choosy



Dover docks, the gateway to England – and to a region that has fared better than most in the recession.

THE South of England may have escaped the worst of the recession and unemployment – currently running at 8% compared with up to 30% elsewhere – but the economic climate of the last few years has left its mark.

In general, companies have been forced to be more budget-conscious and demand more for their money from staff.

Employers are now far more choosy who they take on. They know exactly what they want – and are prepared to hold out for it.

The result, in computer personnel recruitment, is plenty of jobs for experienced people. But for those without it the picture is bleak.

"Employers used to be prepared to train, but now they want results from day one," said Colin Johnson, managing director of a recruitment agency based in Brighton.

He added the argument that over the last few years, as the price of hardware has been coming down, the cost of people has been rising, making staff productivity increasingly important.

"Over the past 18 months employers have become much more fussy. They have a blueprint of who they want. It is a far more critical approach," said Lee Walkinshaw, managing director of Computer People South. "For people without experience it is a desperate story."

Bournemouth branch of Abbey Life Assurance is currently trying to recruit 40 analysts and programmers, representing about a 25% increase in its data processing staff. But the jobs are all open only to those with industry experience – at least five years for analysts and two years for programmers.

"We have no training facilities so we do not take on people without experience," said Melanie Dyball, Abbey Life technical recruitment manager.

But she admitted: "We do get a lot of applications from people without experience."

The principal effect of this stand by employers is that there are not enough trained people to go around, leaving many vacancies unfilled, while there are plenty of hopefuls trying to get a start in the industry.

"There is a lack of people with real time skills – they could all be placed tomorrow. People such as experienced system programmers remain like gold, especially as some demand unacceptable salaries," said Walkinshaw. "But employers are still holding out so jobs are being filled by contract staff."

As for the plight of inexperienced people, Johnson said: "A few years ago in the south, people straight from Tops courses could get jobs, but now it is different. We sometimes test 50 applicants for two or three jobs. We may get 200 replies to an advert for one job, which we then have to try to sift through and compile a short list.

"But it is far better in the south than in the rest of the country."

Companies appear to be building up their computer staff rather than just replacing those that leave. Most consultancies recruiting staff for the south reported a definite upturn in the market over the last three to six months.

The recent boom in the microcomputer market has had its effect on the types of jobs available. "The demand for operators has gone down dramatically over the last three years," said Johnson.

"As more and more people are going for minis and micros they are moving over to the package approach and modifying it."

Demand for all types of analyst and programmer is continuing to increase rapidly, "on the software side dramatically," said Abdel Jaffa, managing director of Bournemouth-based recruitment consultant CBS.

"Recruitment is a problem. There are just not enough people to go round."

Six months is about the minimum experience employers will accept, and most insist on more. Another problem emerging from this unwillingness of employers to take on inexperienced people is a lack of applicants with two years' experience to fill certain jobs.

"There has been a lack of investment by companies in training," commented Walkinshaw. "People trying to get into the industry are having to take administrative jobs and hope for internal opportunities."

Although the computer industry is renowned for its high staff turnover, this trend does not appear widespread in the south. "Turnover of staff is not generally high – unless something is very wrong – because people are worried by the recession," said Johnson.

But Walkinshaw predicted that staff turnover would increase as confidence in the economy grew. "Applicants are more ready to move, especially now that the house market has improved," he said.

"But people are having to take new jobs for not much more money than their last," he added.

There are, however, some differences. "Sussex is having a very hard time," said Johnson. "For good salary and career prospects you probably have to move out of the area towards London. The further from London, the less the pay."

The industry in the south is predominantly made up of financial institutions and other service industries.

"The finance industry is buoyant, and demands a lot of computer staff, especially systems analysts," said Walkinshaw. "Software houses are expanding rapidly. There is also a lot of demand from neo-governmental sources, especially in the defence field."

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The British National Oil Corporation is responsible for marketing over half the total crude oil production from the UK sector of the North Sea, acquired through participation agreements and other arrangements with producers. The Computer Services Section is responsible for the implementation of computer-based systems and their operation.

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IBM COBOL PROGRAMMER — **MIDDX** — **£9,000**
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SENIOR ANALYST/PROJECT LEADER — **MIDDX** — **c£14,000**
The Services Division of this highly profitable manufacturing group is currently running a wide range of systems on an IBM 3033 under MVS with CICS and TSO. They need a candidate with a minimum 6 years in D.P. including some IBM mainframe experience, to take responsibility for the system development of one of its operating companies. PL1 exposure would be useful but is not essential.

IBM ANALYST PROGRAMMER — **MIDDX** — **to £12,000**
This company is part of one of Europes largest manufacturing groups. Their small U.K. D.P. department is developing commercial systems using COBOL on IBM 4331 under DOS VSE with CICS and DL1. They are seeking an Analyst Programmer with about 4 years in D.P., including IBM experience and at least 1 years analysis.

PL1 PROGRAMMER — **MIDDX** — **c£9,000**
This rapidly expanding financial organisation is currently running IBM 4341 under DOS/VSE. The coming year see's the installation of VM/CMS, the upgrading of the mainframe and the evaluation of Video Text. They require a PL1 Programmer with a minimum 18 months experience. Knowledge of CICS would be useful but is not essential.

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JOBS IN EDUCATION AND TRAINING

Micros in schools give a new complexion to education

Despite training demand, big firms are still choosy, says Keith Holder

EDUCATION and training in computing is a growing field, according to most industry analysts, yet the path to a career in this type of work is still just as confusing as ever.

The number of opportunities is matched only by the sheer diversity of places. You can, for example, now join the Army and end up teaching computing.

Some areas are easier to penetrate than others. Customer training in the large computer companies is one, though the face of education is changing. One primary force in this change is the impact of the microprocessor in schools, colleges and perhaps more importantly in industry and business.

The education industry is broadly split into three areas, each with its own requirements.

The first, and at present most active, is education with industrial companies for either customer or internal training.

Companies are always looking for experienced people said Ray Withey, personnel manager for Intel. "We can only support a limited number of untrained people and are always looking for directly relevant experience."

He said vacancies tended to come up on an ad hoc basis as the company's needs changed. There was also the chance for people already employed with the company in other areas to change over – a particularly successful tactic used by the company to get staff who can start on day one.

The story is the same for companies like ICL, Digital Equipment and Control Data. All said that despite a growing demand for training, they could still afford to be choosy and were in general looking for people who could demonstrate a solid technical background. Opportunities for graduates are small, though the larger companies do take on graduate trainees in small numbers.

Stephen Pickman, development officer at Roget, which specialises in compiling lists of graduate vacancies, said: "The educational area has not yet come down to new graduates though there are places in research associations where they can pick up experience, and things are looking up for people of this type."

Of the industrial training areas, the greatest growth has been with micros said Don Yeates from Datasolve. "Some training is for users but there is also a lot going on in teaching computer people like data processing managers how to get the best from these systems.

"The latter are by far the most overloaded type of course we run," he added.

Here the requirement still includes direct experience of working these machines "but personality also counts for a lot," he said.

"You can be the best practitioner in the business, but not able to communicate a thing," observed Yeates. "We are keen to get people with the right combination of experience and personality."

He said that there was a lot of this type of practitioner around but many were reluctant to try their hand at training. "If you are a trainer then you are out on your own – it is very intimidating and exposed," said Yeates.

The selection procedure adopted by Datasolve includes a test lecture, which Yeates thinks is fairly common, and a test of subject knowledge.

Experience need not always be exact, said Yeates. An experienced programmer, for example, has the skills to learn other languages.

Yeates warned potential trainers to look for opportunities for career progression once they had started on this road. He advised that small companies might not be able to match the progression offered if candidates had stayed in their original line of work.

The company is recruiting continuously, mainly for people experienced in micros and systems analysis/design at present.

Salaries are slightly better than the mainstream industry equivalent, "but we do expect some extra skills," commented Yeates.

Staff for management training courses are also in demand. Experience of IBM equipment and programming in Cobol, Fortran and the various versions of Basic used on micro systems are top of the list at the moment though DEC and assembler are close seconds.

Mike Heusien, managing director of S. R. Recruitment, said that education in general was not an area in which career development was clear. "We have customers on the hardware and software side who are offering a significant increase in salary with good prospects, but this is usually true only of the big companies."

He added: "A good programmer can go a long way in the industry. People considering education as a career must bear this in mind."

One area where penetration is difficult is in specialist lecturing. Xephon conducts such courses and needs specialists more or less continuously but, commented Chris Bunyan: "This is an area where we try to buy small parcels of senior people's time. We don't employ people for long periods."

There is also no geographical centre to education apart from the big cities, where many of the training companies have their headquarters. The second area of employment, in the universities, colleges and other academic institutions, provides a useful regional net though requirements are slightly tougher than in industrial training.

Posts in lecturing for computer studies are, according to most education authorities, remaining steady despite the growing use of computers in the outside world. Though government-induced education cuts are cited as a major influence on the growth of courses, one other reason is that computing studies are being incorporated as part of general degrees in other subjects.

Job opportunities exist in these colleges, but again the emphasis on previous industrial or commercial experience is high.

A spokesman for Brighton Polytechnic Department of Computing and Cybernetics said: "In order to give students a useful education it is essential that lecturers have real world experience."

Whereas three or four years' experience was sufficient for industrial sector training, the universities require a longer period, sometimes specifying double this. They also prefer lecturers to have a more broadly based understanding.

Salaries, on the other hand, stay in line with the industrial sector. Pickman said that this was particularly true for senior positions and that this year had seen a real increase in demand, perhaps as high as 10%.

For graduates or relatively inexperienced computer professionals there is still a chance to enter education through schools. The old system under which a science master, for example, would assume the role of computer studies teacher is changing, according to a spokesman for the Department of Education. The increasing infiltration of microcomputers is mainly responsible, with a growing awareness that computer courses will become a more important part of secondary school education in the future.

"I think there's been a misunderstanding. Our 'Toplex Policy' means we don't employ Tops people."

The educational area has not yet come down to new graduates though there are places in research associations where they can pick up experience, and things are looking up for people of this type

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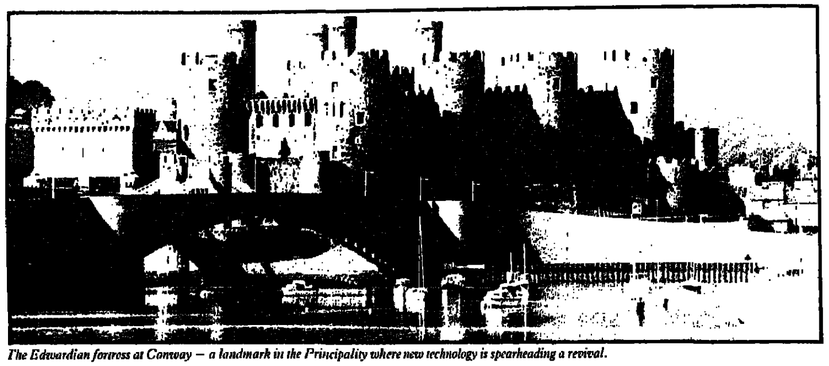
JOBS IN WALES AND THE WEST COUNTRY

The health of the Welsh industry is rapidly on the mend as new complexes spring up, reports Jacqueline Moore



The Edwardian fortress at Conway — a landmark in the Principality where new technology is spearheading a revival.

The hillsides welcome new technology firms

EXPANSION is perhaps not a word automatically associated with industry in Wales while current economic conditions persist. Principal fields of employment, such as the steelworks or coal pits, have suffered from the effects of the recession, or from overworking respectively.

Other traditional industries – fishing, tourism, farming – have suffered the same difficulties. Consequently, unemployment has neared its worst levels in the Principality.

Nevertheless, some companies in Wales are prospering and recruiting extra staff. The computer industry, in particular, is an example of a relatively stable and in some cases increasing source of employment.

Software house Target Computer Group is "expanding rapidly and taking on more staff", according to general office manager Simon Royal.

Cardiff is the base for Target's headquarters. It has about six offices in total, with the other major office located in Manchester.

Royal said that the company had recruited four programmers and one project manager recently – four of whom were taken on at the Cardiff office.

Target usually looks for recruits who meet some specific need, normally with particular relevant experience. "However, there is some scope for trainees," said Royal.

Students from Tops courses have met with success at Target. "We've taken on a couple in the past," he said, "who were quite exceptional. They quickly grasped the job, had up-to-date knowledge of the industry, and understood it."

Royal concluded: "We've had such remarkable success with TOPS, we're happy to recruit along those lines."

North and South Wales have always had two distinct characters. The large industrial towns of the south, like Swansea and Port Talbot, contrast with the hill farms and generally small fishing villages of the more sparsely populated north.

Access to North Wales from London, often an important factor for growth, is not easy and consequently expansion is taking place at a slower pace.

A spokesman for the computer department at Clwyd County Council in Mold, North Wales, said that in the operations department there had been no vacancies for the past five years. There had been more movement, however, in the programming/analyst areas.

On the whole, he said, job prospects had been "very, very static". The reason for this, he suggested, was the fear of unemployment throughout the past few years of recession.

"Once people have got a job," he said, "they've stuck to it."

North Wales is, however, due for some development as far as new technology is concerned. Last month, the Welsh Development Agency announced that it was to set up two 60,000 sq ft complexes – in Newport, Gwent, in the South, and in Deeside in the North. Newtech, a company which develops software for BBC micros, has booked 20,000 sq ft of space in Deeside Park already.

The health of the Welsh computer industry, therefore, seems to be improving rapidly.

The counties on the other side of the Bristol Channel from Wales, which make up the West Country, have also found life fast-moving. Companies are constantly drifting away from the high rates and limited space in London to find room for expansion. They seem to have found this in the west, and that, combined with the easy access to London along the M4, has made it a spawning ground for dozens of new companies.

A pattern of growth or stability among the already-established companies in the West Country is also emerging.

Bob Grinter, programming manager at Westland Helicopters in Yeovil, Somerset, which has over 100 commercial and and scientific analyst/programmers, said that the company had been "growing steadily over the past seven years".

Recruits at Westland, he said, were mainly trainees, both graduates and TOPS students. Training was on the job and, he said, recruits were expected to be doing real work in two to three months, depending on the individual.

In the next door county of Avon is the old trading port of Bristol. The city seems to be set for growth again after some difficulties over the past few years.

Gordon Morris, assistant manager for the council's Avon and Bristol Computer Unit, said that there were no vacancies at present, but "it tends to remain a bit unpredictable".

He also said: "It's quite possible that there will be some expansion, but there's no definite indication."

Although there are no vacancies at the moment, there are no redundancies planned either, a good sign. There are about 100 data processing staff employed.

Earlier there had been reductions in the data preparation area, but that was now levelling out, according to Morris.

If there is expansion, Morris said he would ideally take on graduates with relevant experience to be analyst/programmers. He added, however: "We want people with potential, and who are adaptable and keen to get on, not necessarily graduates."

The Avon and Bristol Computer Unit would only consider taking on trainees when it was up to strength, he said. It might then replace someone junior.

"We have done this internally over the past few years," said Morris. "Some ex-operators have been re-trained as programmers, but we can't do this too often."

The unit in Bristol, like the Target Computer Group in Cardiff, has also recruited some ex-Tops students. "We've taken on two, one of whom is still here," said Morris.

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RUGBY BOROUGH COUNCIL

CITY POLYTECHNIC OF HONG KONG

The Hong Kong Government has appointed a Committee to plan the establishment of a second polytechnic in Hong Kong. To be named the City Polytechnic of Hong Kong, the Institution will have an initial target of the equivalent of 9,000 full-time students by the early 1990s and a planned capacity for an ultimate population of 13,500. The Polytechnic expects to be able to enrol its first students in Autumn 1984.
It is intended that the study programmes should be developed on a modular structure with a strong vocational flavour. The majority of courses will be at professional and higher technician levels, and a substantial number will be day-release and evening courses. There will also be degree programmes, although the number of students on such programmes will not exceed 30% of the total student population.
The Planning Committee has made appointments at Director, Associate Director and Head of Department levels. Some of them are already in post. Meanwhile, applications are invited for the following posts:

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(Ref. No. CP/CC/001/83)
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(Ref. No. CP/MIU/001/83)
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DEPARTMENT OF COMPUTING STUDIES
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Applications: Application forms and job specifications are obtainable from the Associate Job of Commonwealth Universities (Appts.), John Foster House, 36 Gordon Square, London WC1H 0PF. Complete forms should reach the Secretary to the Planning Committee, P.O. Box 98441, Tsim Sha Tsui Post Office, Hong Kong, by November 15th, 1983. One additional copy should also be lodged with the Association of Commonwealth Universities. Please mark appropriate reference number on cover. For the posts at Headship level, candidates who have applied in response to the previous advertisement in April 1983, need not re-apply.
Interviews: For all the above posts, interviews of United Kingdom candidates on the shortlist are planned to take place in London in the second and third weeks of January, 1984. The recommended candidates for Head of Department posts will be invited to attend final interviews in Hong Kong around the third week of January.

(6348)

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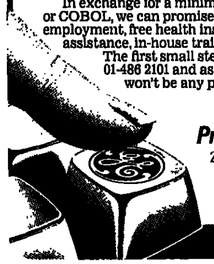

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Exhibitions are an opportunity to be exploited

FOR those who have never worked at an exhibition, life on an exhibition stand may seem like a soft option, an opportunity for escaping the rigours of the field. For those who have seen it all before it is an occasion greeted with mixed emotions.

Make no mistake: working at an exhibition is hard work. It almost certainly demands standing around for maybe eight or nine hours a day. A week of that can be exhausting.

Then there is the work itself, sometimes exhilarating, sometimes boring, lots of pressure, lots of time-wasting. It very much depends on factors such as the attraction of the exhibition in general, the product in particular, the influence of external promotion, the quality of the stand, the time of day, and so on.

But like all selling situations, personal and company success can be very much a reflection of attitude. Many sales people approach the exhibition syndrome with a negative frame of mind which results in personal frustration and poor return for the investment of effort.

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It is so important to view the exhibition in its true context – it is one of those rare situations where prospects actually cut a way to your front door!

Sadly my overriding impression of Compec, or indeed any other exhibition, is one of lost opportunities.

Take the plastic carrier-bag syndrome. Some enthusiastic body confronts you with an armful of plastic bags, each bearing the company legend: "The Superboob Micro – a legend in its own time" (about a fortnight!).

"Of course" you say, "thank you very much" also thinking to yourself "just as long as you don't try to sell me anything!"

At which you proceed to empty into it all the brochures you have collected about products you are really interested in, and then proceed on your way with a cheery farewell, never to give a second thought to the wonder of Superboob.

Why does it not occur to those people who cannot resist the urge to give away plastic carrier-bags that there is a way of getting more value out of the exercise than simply putting their name about.

The first rule is not to flaunt the carrier-bags.

The second is to select a location well away from your own stand. After all, if they've made it there, your objective is already achieved. The best rewards are from identifying locations with plenty of traffic but no overcrowding. People won't stop in a moving crowd.

The third is to use the approach as a means of asking a question which will link your product with any related interest of the visitor.

"Will you be looking at computers related to stock control during your visit?" If the answer is "No" then your reply can be anything from "I hope you enjoy your visit anyway," to "Well here's our system for controlling the stock of product literature that's under your arm!"

If the answer is "Yes" then a single message like "In that case, be sure to visit the Superboob stand. We are demonstrating the very latest in stock control systems!" gives some purpose to the exercise.

But it doesn't finish there. Then you say "Inside this bag is an exhibition plan which will guide you to our stand and also a pre-paid card, indicating our various areas of capability, with which you can apply for product literature should you have insufficient time to see one of our demonstrations."

Now isn't that a lot more constructive and likely to generate a positive return than "Hello sunshine. Have a bag!"

Then we have the ultimate sin, the very essence of negative selling. "Can I help you?"

It is so very hard to resist the reflex reply of "No, thank you!" even if it is conditioned by the afterthought "– I'm just looking." In some circumstances it is even worse than being ignored. At least being left alone gives you the chance to poke around and perhaps discover something interesting.

Well, there is an answer, and I offer it to you as a gift in celebration of Compec. It is the word "How". All you have to do is add it at the most trite of all "closed" questions and it immediately becomes open ended.

"How can I help you?" adds new dimensions to the introductory statement. Why, who knows, the prospect might even start talking about his needs!

There are other negative situations that the visitor inevitably comes across during an exhibition. There's the "We're too busy doing things out the back to come and see you" syndrome. There's nothing worse than calling on an empty stand only to be ignored, despite the fact you know there are people around who apparently believe their out-of-sight activities are more important than prospective clients.

Here are a few more hints you may find useful:

1. Organise your stand and its personnel so that it attracts visitors rather than drives them away. The appeal of an exhibition stand is usually in the hands of designers rather than the sales people who work from them. However, the way they are manned can have a great effect upon whether or not people actually come and visit and get involved in whatever is on offer. So don't let your sales people stand in tight formation as if to repel boarders.

2. Don't get involved with extended chats if there are other visitors around the stand waiting to be seen. Be brief, qualify hard, demonstrate the product only if you are sure a demonstration at the client's premises would not be more effective, agree follow-up action.

3. Have some enquiry pads specially prepared that contain all the facts you need in order to thoroughly qualify the sales potential of any visitor.

4. Do have a few high stools around, rather than chairs so that your salespeople can occasionally prop themselves up without showing the apparent disinterest of actually sitting down.

Nothing is more important that what is actually said to visitors once they have been engaged in conversation.

That's what I'd like to discuss next week.

Alan Williams